



LITTLE ILFORD SCHOOL

COURAGE • COMMITMENT • COMPASSION

STUDENT PLANNER

2025/26

Name:

Form:

Form Room:

Form Tutor:

PAL:

DPAL:

Timing of the School Day 2025 - 2026

School gates open	7.45
School gates close	8.20
Registration Line Ups	8.20 - 8.30
Registration	8.30 - 9.00
Period 1	9.00 - 9.50
Period 2	9.50 - 10.40
Break	10.40 - 11.00
Period 3	11.00 - 11.50
Period 4	11.50 - 12.40
Lunch	12.40 - 13.25
Period 5	13.25 - 14.15
Period 6	14.15 - 15.05

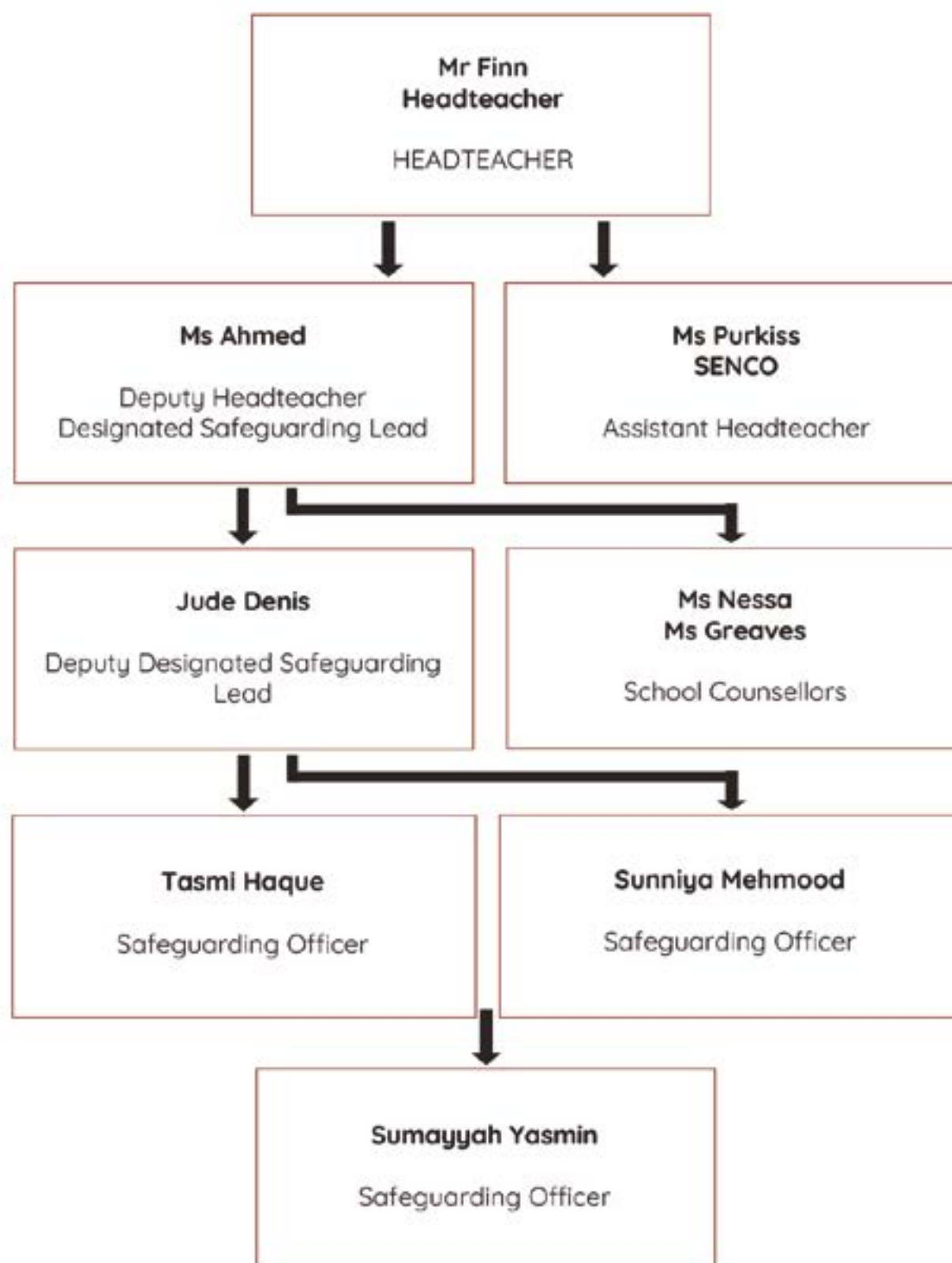
Breakfast Club: 7.45 am - 8.15 am

Library Opening Times: 8.00 am - 4.00 pm

School Terms 2025-2026

Autumn term	Monday 1 September 2025 - Friday 24 October 2025 Monday 3 November 2025 - Friday 19 December 2025 Tuesday 2 September 2025 - first day for Y7 students Wednesday 3 September 2025 - first day for Y8 - Y11 students
Spring Term	Monday 5 January 2026 - Friday 13 February 2026 Monday 23 February 2026 - Friday 27 March 2026
Summer Term	Monday 13 April 2026 - Friday 22 May 2026 Monday 1 June 2026 - Friday 17 July 2026
INSET Days	Monday 1 September 2025 Monday 5 January 2026 Friday 26 June 2026
School Holidays 2025-2026	
Autumn Half Term	Monday 27 October 2025 - Friday 31 October 2025
Christmas Break	Monday 22 December 2025 - Friday 2 January 2026
Spring Half Term	Monday 16 February 2026 - Friday 20 February 2026
Eid-ul-Fitr	Friday 20 March 2026 <i>(date to be confirmed by the moon sighting closer to the time)</i>
Easter Break	Monday 30 March 2026 - Friday 10 April 2026
May Day Bank Holiday	Monday 4 May 2026

SAFEGUARDING TEAM



Little Ilford School Home School Agreement



We want every person to feel safe, happy and enthusiastic about their learning in our school and we live this through our values.

COURAGE	COMMITMENT	COMPASSION
Do the right thing at all times, even when it might be difficult	Work hard to make improvements every day	Be responsible and polite to everyone in the school community

As a school

We will demonstrate compassion by:

- Supporting your child's wellbeing and safety by providing a safe, supportive and caring environment
- Providing a broad and balanced curriculum that caters for all children, including when delivered remotely
- Valuing all positive contributions
- Rewarding students for good behaviour, effort and high-quality work
- Respecting everybody's race, culture, gender and sexual orientation

We will demonstrate courage by:

- Promoting high standards of behaviour, and outline clear expectations in our behaviour policy so we can maintain a safe environment for all children
- Applying rules and consequences consistently, sanctioning poor conduct where necessary
- Modelling the behaviour expected from students

We will demonstrate commitment by:

- Helping and encouraging your child to reach their full potential
- Monitoring and updating you on your child's progress at parent meetings and annual written reports
- Communicating any concerns about your child's attendance/behaviour/wellbeing with you as their parent or carer, and responding in a timely manner to any concerns from your child or yourselves as parents/carers
- Setting homework which supports the delivery of the curriculum and mark it where appropriate
- Offering opportunities for parents and carers to get involved in school life

Little Ilford School Home School Agreement

- Communicating between home and school through notices, newsletters, text, email and the school website
- Responding to communications from parents in a timely manner, following school policies
- Offering well-prepared lessons and set clear and intellectually interesting tasks

Parents/carers

All of our policies are based on sound education practices and sit within the wider guidance set by the Department for Education and we ask that parents and carers **demonstrate commitment** to the school's vision, values and systems.

I will:

- make sure my child attends school regularly and on time. I will notify the school if my child will be absent or late
- make sure my child is dressed in the correct uniform and brings the necessary equipment to school, informing the school on the day if this is not possible
- support the school to make sure my child maintains a consistently high standard of behaviour by reading and adhering to our school policies, including our sanctions strategy and our expectations regarding mobile phones.
- download any apps such as Satchel One and MyEd in order to support the school behaviour policy.
- encourage my child to try their best so they can reach their full potential
- communicate to the school any concerns that I have about my child which may affect their behaviour in school, or ability to learn and achieve
- make sure communication with the school is respectful, and that I make every reasonable effort to address my communications to the appropriate member of staff using the diary in the first instance, or the MyEd app.
- understand that I should communicate with staff during core school hours, and although they may at times respond outside of those hours, I can't always expect that
- make sure that my child completes their homework on time by checking the diary, Satchel One or Google Classroom and raise any issues with their teachers
- treat all members of the school community with care and respect
- engage in parent meetings and work together with the school in order to achieve the best outcomes for my child
- read any communications sent home by the school and respond, where necessary

Little Ilford School Home School Agreement

Students

As a student I will:

Show my courage:

- by trying my best to do my work and ask for help if I need it and not disturbing others
- by speaking to an adult about any issues I'm experiencing that may affect my work or behaviour
- Accepting any support offered by school by accepting any sanctions given by the school which are designed to support my progress and achievement
- by celebrating my own and other people's achievement in an appropriate manner

Show my commitment:

- by arriving to school and my lessons every day on time and ready to learn and start the 'Do Now'
- by recording and doing my homework on time and raise any issues with my teachers
- by wearing the correct school uniform before, during and when returning home from school
- by bringing to school all the equipment I need each day
- by looking after school equipment, and showing respect for the school environment and local community, acting as an ambassador for Little Ilford School at all times.
- by understanding and following the school rules particularly for mobile phones

Show my compassion:

- by treating all members of the school community with care and respect others' race, culture, gender and sexual orientation
- by speaking to an adult about any concerns I have about my or other pupils' safety

Signed:

Parent	Date
Student	Date
Form Tutor	Date

Little Ilford School Home School Agreement

Stage of sanction	Examples of unacceptable behaviour	Sanction
First warning	<ul style="list-style-type: none"> Not tracking the speaker Calling out Not following instructions 	The teacher states that the student has received their first warning.
Final choice The student chooses to remain and learn or is asked to leave the lesson if their behaviour is not corrected	<ul style="list-style-type: none"> Talking over teacher or other students Disrupting the lesson Arguing with the teacher, e.g., by saying 'I didn't do it' when asked to stop doing something 	The teacher states that the student has received their second warning and issues a behaviour point.
Removal from learning and placed into the Behaviour Improvement Room	<ul style="list-style-type: none"> Obvious disrespect to the member of staff Continual refusal to follow an instruction Disrespect to another student Not following safety instructions (Play) fighting Theft Being in possession of a banned item 	<p>Student will be removed from the lesson and given a one-hour detention and have a reconciliation meeting with a member of staff</p> <p>Your parents will be notified by email/app.</p>

Attendance and Punctuality

Little Ilford is a good school and parents/carers and their children play a part in making it so. We aim to encourage all members of the school community to reach out for excellence.

For children to gain the greatest benefit from their education, it is vital that they attend school regularly and punctually:

- an attendance of 95% equates to half a day off every two weeks
- an attendance of 90% equates to a day off every two weeks
- an attendance of 85% equates to one and a half days off every two weeks
- an attendance of 80% equates to one whole day off every week

A secondary age child whose attendance is 80% will have missed ONE WHOLE YEAR of education by the time they leave school.

Every half-day absence from school has to be classified by the school as AUTHORISED or UNAUTHORISED. This is why information about the cause of any absence is always required in writing. If relevant, medical evidence is also required in the form of a copy of a prescription, GP note or appointment letter, etc.

Little Ilford School expects all parents to contact school advising of their child's absence for any unavoidable reason, such as being too ill to attend, by 8:00 am at the very latest. You can contact school in the following ways:

By telephone: 020 8928 3575

By app: MyEd

By email: info@littleilford.org

Types of absence that are likely to be authorised are: illness with medical; medical or dental appointments which unavoidably fall in school time; emergencies. We will only authorise three (3) calls from parents/carers for three different episodes of sickness during a school year. If a child keeps getting sick/ill, it is a parental duty to ensure medical checks are taking place and school is provided with evidence of those. Any other absence for illness after the three episodes of sickness will require medical proof to be authorised.

Attendance and Punctuality

Examples of types of absence that are not considered reasonable and which will not be authorised under any circumstances are:

- Going shopping with parents
- Minor ailments (e.g., headache)
- Oversleeping
- Traffic/transport issues
- Birthdays
- Minding other younger children in the family
- Dropping a sibling to school
- Staying at home because other members in the family are unwell
- Day trips and holidays in term time
- Arriving at school too late to get a present mark without a valid reason
- Truancy
- Acting as a translator (e.g., for family members) etc.

Little Ilford School will reward students who have 100% attendance and punctuality. This could be done by recognising these students in assembly, issuing certificates, special lunches in school, lunch passes to avoid the queue, etc.

A pupil is classed as late if they arrive at school after 8:20 am. Students who are late will receive one-hour detention on the day.

Students who are frequently late or absent will be removed from some extracurricular activities at the discretion of the school. Other sanctions may also be applied to recidivists. For pupils whose attendance and/or punctuality fails to improve after a range of interventions and support measures have been tried by the school, the ultimate consequences may be one of the following:

Local Authority intervention, Penalty Notices and other legal interventions:



Little Ilford School Library

At Little Ilford School we believe that reading is the key to success. People who read every day increase their vocabulary, improve their writing and learn some interesting things about the wider world. So we hope that you will make the most of your school library to:

- Read (books, manga and magazines)
- Find new resources
- Get advice on what to read
- Do homework
- Find information
- Take part in library events, author visits and reading and writing activities

The Library is open:

Monday – Friday 8:00 am - 4:00 pm

Student planners must be inspected before they are allowed in to the library (except for when they are in the library for a lesson).

Each pupil may borrow up to three fiction books and three non-fiction books for up to three weeks. After this time, books should be returned or brought in to be renewed, this extends the loan for another three weeks (please note that books on a waiting list cannot be renewed).

Taking responsibility

You are responsible for looking after the books you borrow. In the event that any books are damaged or lost, do tell the librarians. You will not be in trouble, but will be expected to pay for the loss or damage.

Little Ilford School Library

How to borrow ebooks - Go to
<https://littleilford.eplatform.co/>

Sign in with your school network username and password (the same one that you use to log in to a computer. For example:
username: jbond7.216 and then your password

If you have forgotten your login details or are new to the school, do ask the librarian.

Also visit the 'student' menu on the school website to gain access to the library page for information about learning resources available to you.

The Student Council

Little Ilford School has a school council that provides a forum for student involvement in decision-making within the school. Your opinions are important and this is the platform to have your voice heard. There are a plethora of things you can get involved with.

The main purposes of the Student Council are:

- To listen to students' opinions and concerns
- To represent these views at School Council meetings and other forum
- To improve the school and in doing so, help students

Aims:

- To act as a link between teachers and students and governors, gathering and disseminating information
- To be involved in decision-making
- To provide staff with grass-root feedback
- To make the school a better place

If you are an embodiment of the 3Cs; Courage, Commitment and Compassion; The compassion to reflect on yesterday; The commitment to change today; The courage to be the voice of tomorrow, and you have demonstrated a desire to improve the school, then you are a suitable candidate.

Young Leaders' Roles and Responsibilities

- To act as a positive role model to all
- Carry out their lunchtime and breaktime duties
- To play a key role at all school events, such as Parents' and Open evenings.
- Be smartly dressed in full correct school uniform.
- Maintain an excellent attendance record.
- Maintain a perfect behaviour record.
- Be positive, proactive, mature and enthusiastic.
- To be willing to take on extra responsibility, if needed.

Rules for Usage of ICT/Devices

Students must:

- Report unsuitable sites.
- Ensure that the use of internet derived materials complies with copyright law.
- Not reveal personal details of themselves or others in e-mail communication, or arrange to meet anyone without specific permission.
- Not publish photographs/videos that include students or teachers.
- Never give out personal details of any kind which may identify them or their location when using social networking sites (e.g., real name, address, mobile or landline phone numbers, school, IM address, e-mail address, names of friends, specific interests and clubs etc.)
- Take care regarding background detail in a photograph which could identify a student or his/her location (e.g., house number, street name, academy, shopping centre).
- Not post indecent or inappropriate images of yourself or others.
- Be aware that bullying can take place through social networking especially when a space has been set up without a password and others are invited to see the bully's comments.
- Not send abusive or inappropriate text messages.
- Inform the school and parents/carers if cyberbullying occurs.
- Sign a mobile phone user agreement for educational visits and adhere to the terms.
- Not use social media to cause any conflict or harm inside or outside the school, or bring the school into disrepute.
- Never film or take pictures of other students or staff.

Help and advice at school

If you're worried about your safety, talk to your Form Tutor, PAL/Dpal, or Miss Ahmed (Designated Safeguarding Lead).

Help and advice at home

Childline www.childline.org.uk 0800 1111 NSPCC
help@nspcc.org.uk 0808 800 5000

Uniform

Little Ilford is a multicultural and uniform school; we are a non-religious school and it is expected that all students are correctly dressed. Form tutors have the responsibility of monitoring their students to ensure correct dress is worn. Form tutors will note this and take appropriate action by notifying parents.

Uniform is a high priority as regards our high expectations of our student community. All infringements of the uniform code will result in a one hour detention and behaviour points accrued if an appropriate reason, supported by a parental note or message, is not supplied on the day. A parent message will also be sent.

We recommend that parents add their child's name to all items of uniform for easy identification.

THIS IS A UNIFORM SCHOOL. THE WEARING OF FULL SCHOOL UNIFORM EVERY DAY IS ESSENTIAL.

ALL STUDENTS

- Black blazer with red piping on lapel and Little Ilford School badge on pocket
- School tie with year group colour - 2024-25 (colours will be kept with year group throughout students' career at school)
 - Y7: Red & Blue
 - Y8: Red & Silver
 - Y9: Red & Purple
 - Y10: Red & Green
 - Y11: Red & Yellow
- Black V neck pullover with embroidered badge (Optional)
- Plain smart black trousers - No jeans, chinos or leisure wear and no skinny fit clothing
- White shirt with a collar
- Low heeled black shoes or plain black ankle length boots (not trainers/plimsolls or canvas shoes)



Uniform

- Appearance Standards: Students with visible tattoos, body modifications, or other distinguishing features that do not align with the school's appearance guidelines may be subject to review and could potentially be refused entry.

GIRLS

- Black or white socks
- Plain black salwar kameez or kameez **with the school logo** at knee length with plain black trousers as described above
- Formal tailored skirts must be between knee length to ankle length, no skinny fit clothing
- Black abaya/jilbab/salwar kameez or jilbab **with the school logo** (For Health and Safety reasons we do stress that the abaya/jilbab must be ankle length and no longer. Furthermore, casual trousers such as jeans must not be worn underneath)
- Plain black headscarves with a stripe corresponding with their year group colour all around the edges of the scarf. No other headcovering should be worn including bandanas. Must be purchased from school suppliers or from the school.

NO MAKEUP/DYED HAIR (only natural colour hair is permitted)/FALSE EYELASHES/
FALSE NAILS

NO BURKAS/NIQABS OR ARTICLES COVERING THE FACE SHOULD BE WORN

NO Cardigans

BOYS

- Black or white socks
- No cardigans
- No prayer caps (other than for use at prayers), durags, baseball caps or other headwear (other than religious turbans or for medical reasons)

P.E KIT FOR GIRLS:

Black polo shirt with embroidered badge

Black and red shorts which must reach the top of the knee

Black and red socks - which must be below the knee

P.E KIT FOR BOYS:

Black polo shirt with embroidered badge

Black and red shorts

Black and red socks

Uniform

NOTE - All manner of portable electronic devices are not to be used in school: e.g. mobile phones, smartwatches, MP3/4 players, portable gaming devices etc. Any such items will be confiscated and only returned at the end of the week as with the mobile phones policy.

Under Section 94 of the Education and Inspections Act 2006, teachers and schools are not liable for any loss or damage to an item lawfully confiscated from a pupil as a disciplinary measure.



Parents' Evening Time Slots

Parents’ Evening Notes

SUBJECT	NOTES
English	
Maths	
Science	
R.E	
P.E	

CONTENTS:

Geography	24-32
Modern Foreign Languages	33-44
English	45-49
Music	50-51
Drama	52-57
Computer Science	58-62
Business	63-67
Media	68-69
Mathematics	70-74
Science	75-82

Map of United Kingdom



Map of Europe



Map of Europe



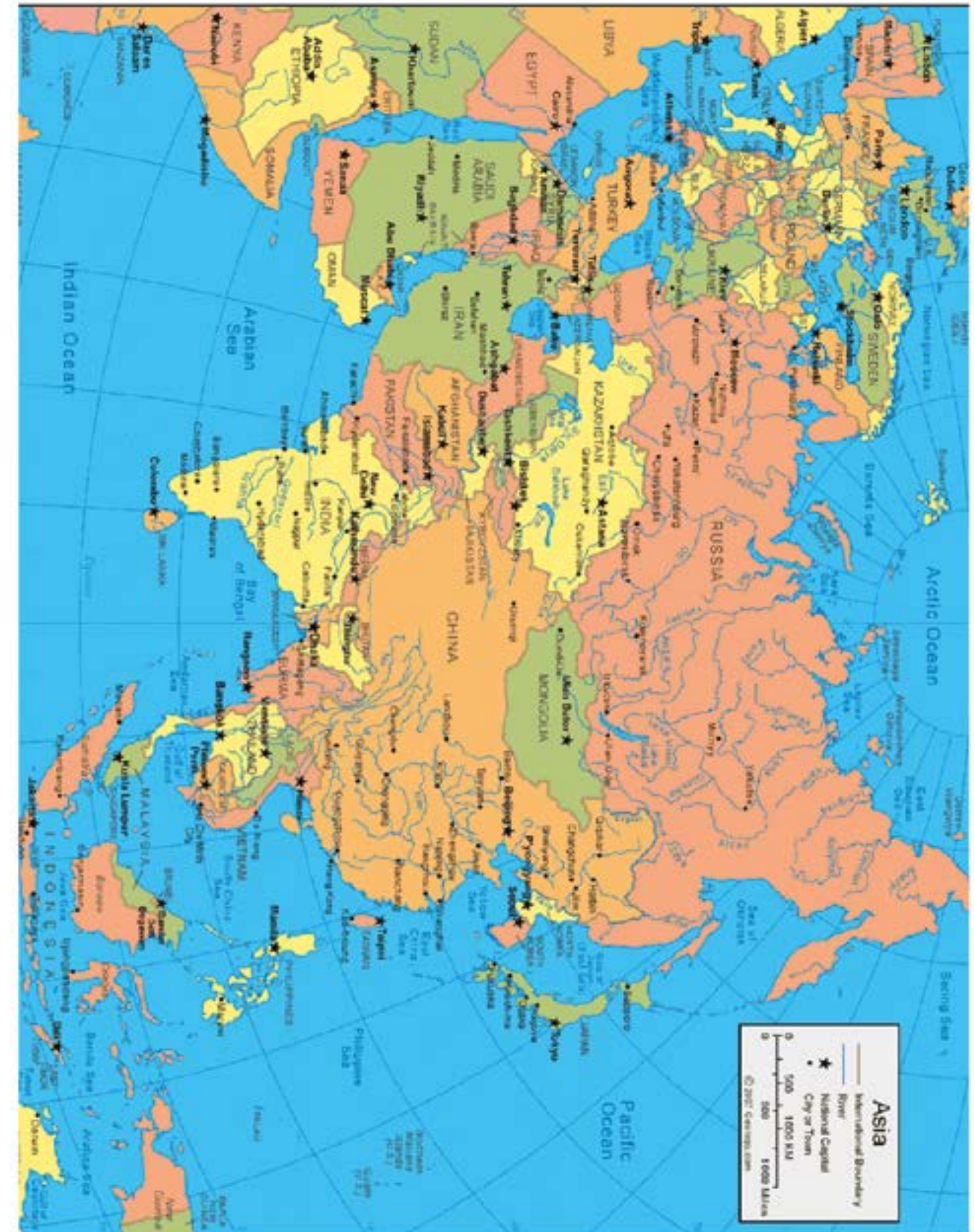
World Map



World Map



Asia Map



Oceania Map



North America Map



South America Map



Africa Map



MODERN FOREIGN LANGUAGES

Basic vocabulary in French – Classroom language	
Expressions à utiliser en classe	
Monsieur / Madame / Mademoiselle	Sir / Mrs / Miss
merci	thank you
de rien	you're welcome
s'il vous plaît	please
excusez-moi	excuse me
pardon	sorry
je voudrais ...	I would like ...
j'ai oublié ...	I have forgotten ...
j'ai perdu ...	I have lost ...
j'ai besoin d'/de ...	I need ...
... un / mon stylo	... a/my pen
... du papier	... some paper
... un (nouveau) cahier / mon cahier	... a new book / my book
... les /mes devoirs	... the / my homework
... de la colle	... glue
... d'aide	... help
j'ai fini	I have finished
j'ai gagné / nous avons gagné	I have won / we have won
j'ai perdu / nous avons perdu	I have lost / we have lost
Est-ce que je peux ...	Can I ...
... aller aux toilettes ?	... go to the toilet ?
... enlever mon pull ?	... take off my jumper ?
... parler en anglais ?	... speak in English ?
... me lever ?	... get up ?
... changer de place ?	... change seats ?
... l'expliquer à ... ?	... explain it to ... ?
... aider ... ?	... help ... ?
je ne comprends pas	I don't understand
Pouvez-vous répéter ?	Can you repeat ?
Pouvez-vous l'expliquer (en anglais) ?	Can you explain it (in English) ?
Est-ce qu'il faut copier ?	Do we copy it ?
Comment on dit ... (en anglais/en français) ?	How do you say ... (in English/in French) ?
Que veut dire ... ?	What does ... mean ?
Je suis en retard parce que ...	I am late because ...
... le bus était en retard	... the bus was late
... je me suis levé trop tard	... I got up too late
... je n'ai pas entendu mon réveil	... I did not hear my alarm
... je parlais à Monsieur / Madame I was talking to Mr / Ms ...
lisez !	read !
copiez !	copy !
écrivez !	write !
écoutez !	listen !
collez !	stick !
levez-vous !	get up !
asseyez-vous !	sit down !
levez la main !	raise your hand !
sortez vos affaires !	get your things out !
rangez vos affaires !	pack up !

Basic Vocabulary in French				
Numbers 1 - 100				
1 un	11 onze	21 vingt-et-un	70 soixante dix (10+60)	80 quatre-vingt
2 deux	12 douze	22 vingt-deux	71 soixante et onze (11+60)	81 quatre-vingt-un
3 trois	13 treize	23 vingt-trois	72 soixante douze	82 quatre-vingt-deux
4 quatre	14 quatorze	24 vingt-quatre	73 soixante treize	83 quatre-vingt-trois
5 cinq	15 quinze	25 vingt-cinq	74 soixante quatorze	...
6 six	16 seize	...	75 soixante quinze	90 quatre-vingt dix
7 sept	17 dix-sept	30 trente	76 soixante seize	91 quatre-vingt onze
8 huit	18 dix-huit	40 quarante	77 soixante dix-sept	92 quatre-vingt douze
9 neuf	19 dix-neuf	50 cinquante	78 soixante dix-huit	...
10 dix	20 vingt	60 soixante	79 soixante dix-neuf	100 cent 1000 mille

être – to be

je suis – I am
tu es – you are
il/elle/c'est – he/she/it is
nous sommes – we are
vous êtes – you are (plural or formal)
ils/elles sont – they are

avoir – to have

j'ai – I have
tu as – you have
il/elle a – he/she has
nous avons – we have
vous avez – you have (plural or formal)
ils/elles ont – they have

Key verbs to describe yourself and others:

	Je - I	Il/elle – he/she	Ils/elles – they
Name	je m'appelle	il/elle s'appelle ...	ils/elles s'appellent ...
Age	j'ai ... ans	il/elle a ... ans	ils/elles ont ... ans
Birthday	mon anniversaire, c'est le ...	son anniversaire, c'est le ...	leur anniversaire, c'est le ...
Live	j'habite à ...	il/elle habite à ...	ils/elles habitent à ...
Nationality/ personality	je suis ...	il/elle est ...	ils/elles sont
Country of birth	je suis né en/au	il/elle est né en/au ...	ils/elles sont né en/au
Hair	j'ai les cheveux ...	il/elle a les cheveux ...	ils/elles ont les cheveux ...
Eyes	j'ai les yeux ...	il/elle a les yeux ...	ils/elles ont les yeux ...

Impersonal verbs

present	past	future	conditional
c'est / ce n'est pas – it's / it's not	c'était / ce n'était pas – it was / it was not	ce sera / ce ne sera pas – it will be / it will not be	ce serait / ce ne serait pas – it would be / it would not be
il y a / il n'y a pas de – there is / there isn't	il y avait / il n'y avait pas de – there was / there wasn't	il y aura / il n'y aura pas de – there will be / there will not be	il y aurait / il n'y aurait pas de – there would be / there would not be
on peut / on ne peut pas – one can / one cannot	on pouvait / on ne pouvait pas – one could / one could not	on pourra / on ne pourra pas – one will be able to / one will not be able to	on pourrait / on ne pourrait pas – one would be able to / one would not be able to

Opinion starters

je trouve que	j'aime	je suis fan de
je pense que	je n'aime pas	je m'intéresse à
je crois que	j'adore	je suis fou de
selon moi	je déteste	je ne supporte pas
à mon avis	je préfère	j'ai horreur de

Basic Vocabulary in Spanish

Time Markers		Frequency Words	
El fin de semana El sábado por la mañana El sábado por la tarde El sábado por la noche El domingo por la mañana El domingo por la tarde El domingo por la noche Durante la semana Cada día	For verbs in the present	Normalmente (normally)(usually) Siempre (always) de vez en cuando(from time to time) a veces (sometimes) nunca/ jamás(never) una vez a la semana (once a week) dos veces (twice)	For verbs in any tense (except normally which is present tense)
El fin de semana pasado El sábado pasado Ayer	For verbs in the past tense	como llovió (as it rained) como hizo buen tiempo(as the weather was nice) como hacía mal tiempo(as the weather was bad)	For verbs in past
El próximo fin de semana El sábado que viene Mañana	For verbs in the future tense	si llueve (if it rains) si hace buen tiempo(if the weather is nice) si hace mal tiempo(if the weather is bad) quizás(maybe) si es posible (if possible) si me lo permiten (if I'm allowed)	For verbs in the present or future tense
Link words		Opinions	
y (and) entonces(then) después de eso(after that) luego(then) más tarde (later) también(also) pero (but) sin embargo(however) aunque(although)		Pienso que es/ fue/ será ...(+ adjective – in bold) Creo que, es/ fue/ será ...(+ adjective – in bold) Desde mi punto de vista es/fue/ será ...(+ adjective – in bold) "Según yo" es/ fue/ será ...(+ adjective – in bold) útil, inútil, fácil, difícil, importante, diferente, molesto, frustrante, una pérdida de tiempo, bueno / malo, fascinante, increíble, magnífico, divertido, impresionante, relajante, tedioso, tonto, interesante, malo, malo para la salud, fantástica, excelente ...	

Verbs in the infinitive	Complements
bailar – to dance/ dancing	al la discoteca – at the disco
comprar – to buy / buying	CDs (CDs) / ropa (clothes) / videojuegos
jugar – to play / playing	al baloncesto/ al fútbol / al tenis / a los videojuegos/ al cricket
ver – to watch/ watching	una película/ la televisión/ videos de YouTube
escuchar – to listen / listening	música
comer – to eat / eating	una comida copiosa(a big meal) / en un restaurante/ una pizza
nadar – to swim / swimming	en la piscina(in the swimming pool) en el mar (in the sea)
visitar – to visit / visiting	monumentos históricos(historic monuments)
quedarse – to stay / staying	en casa (at home)
hablar – to chat / chatting	con los amigos por Whatsapp / por teléfono
trabajar – to work / working	en el jardín(in the garden)
beber – to drink / drinking	de limonada/ de coca cola(a coke) / de agua(water)
hacer – to do / doing	mis deberes (my homework) ciclismo (cycling)
leer – to read / reading	un libro (a book)/ un periódico (a newspaper)
dormir – to sleep / sleeping	en la cama(in my bed)
ir – to go / going	al cine (to the cinema) al parque/ al centro comercial
salir – to go out / going out	con mis amigos(with my friends) con mi familia

PRESENTE

Remove the ending of the infinitive (-ar, -er, -ir) and add:

	BAILAR	COMER	ESCRIBIR
Yo	Bail-o	Com-o	Escrib-o
Tú	Bail-as	Com-es	Escrib-es
Él/ ella	Bail-a	Com-e	Escrib-e
Nosotros/ nosotras	Bail-amos	Com-emos	Escrib-imos
Vosotros/ vosotras	Bail-áis	Com-éis	Escrib-ís
Ellos/ ellas	Bail-an	Com-en	Escrib-en

PASADO

Remove the ending of the infinitive (-ar, -er, -ir) and add:

	BAILAR	COMER	ESCRIBIR
Yo	Bail-é	Com-í	Escrib-í
Tú	Bail-aste	Com-iste	Escrib-iste
Él/ ella	Bail-ó	Com-ió	Escrib-ió
Nosotros/ nosotras	Bail-amos	Com-imos	Escrib-imos
Vosotros/ vosotras	Bail-asteis	Com-isteis	Escrib-isteis
Ellos/ ellas	Bail-aron	Com-ieron	Escrib-ieron

FUTURO (will future)

Keep the ending of the infinitive (-ar, -er, -ir) and add:

	BAILAR	COMER	ESCRIBIR	Going to future
				AR / ER / IR verbs
Yo	Bailar-é	Comer-é	Escribir-é	voy a + infinitive
Tú	Bailar-ás	Comer-ás	Escribir-ás	vas a + infinitive
Él/ ella	Bailar-á	Comer-á	Escribir-á	va a + infinitive
Nosotros/ nosotras	Bailar-emos	Comer-emos	Escribir-emos	vamos a + infinitive
Vosotros/ vosotras	Bailar-éis	Comer-éis	Escribir-éis	vais a + infinitive
Ellos/ ellas	Bailar-án	Comer-án	Escribir-án	van a + infinitive

CONDICIONAL (would future)

Keep the ending of the infinitive (-ar, -er, -ir) and add:

	BAILAR	COMER	ESCRIBIR
Yo	Bailar-ía	Comer-ía	Escribir-ía
Tú	Bailar-ías	Comer-ías	Escribir-ías
Él/ ella	Bailar-ía	Comer-ía	Escribir-ía
Nosotros/ nosotras	Bailar-íamos	Comer-íamos	Escribir-íamos
Vosotros/ vosotras	Bailar-íais	Comer-íais	Escribir-íais
Ellos/ ellas	Bailar-ían	Comer-ían	Escribir-ían

Link Words / Connectives

adding	y and o or También also Es más furthermore Además besides / in addition De hecho in fact
cause and effect	Porque because Debido a because of Así que so De esa manera that way Como as Es por eso que that is why Por consiguiente consequently Esto causa this causes Es la razón por la cual it's the reason why Si if Luego then Gracias a thanks to
sequencing	Entonces then Primero first Después de esto after that Desde/ para since / for Después after Primeramente/ en segundo lugar/ en tercer lugar firstly / secondly / thirdly Finalmente finally Para terminar to finish Mientras tanto in the meantime Al mismo tiempo at the same time
contrasting	Aunque even if / although Sin embargo however Por otro lado on the other hand En vez de instead of Aparte apart from A pesar de despite Mientras que whereas A pesar de even though Excepto except
emphasis	Sobre todo / especialmente above all / especially En particular in particular De hecho in fact
illustrating	Por ejemplo for example Como as Tales como such as

Basic Vocabulary in French

Time Markers		Frequency Words	
Le weekend (at the weekend) Le samedi matin (on sat. morning) Le samedi après-midi (on sat. after-noon) Le samedi soir (sat. evening) Le dimanche matin (sun. morning) Le dimanche après-midi (sun. after-noon) Le dimanche soir (sun. evening) Dans la semaine (in the week) Tous les jours (every day)	For verbs in the present tense	Normalement (normally) D'habitude (usually) toujours (always) de temps en temps (from time to time) parfois (sometimes) une fois par semaine (once per week) deux fois (twice)	For verbs in any tense (except normally which is present tense)
Le weekend dernier Samedi dernier La semaine dernière hier	For verbs in the past tense	parce qu'il pleuvait parce qu'il faisait beau parce qu'il faisait mauvais	For verbs in past tense
Le weekend prochain le samedi prochain la semaine prochaine demain (tomorrow)	For verbs in the future	s'il pleut s'il fait beau s'il fait mauvais peut-être (maybe) si possible (if possible) si j'ai le droit (if I'm allowed)	For verbs in the present or future tense
Link words	Opinions		
et (and) puis (then) après cela (after that) ensuite (then) plus tard (later) aussi (also) mais (but) par contre (however) bien que (although)	Je pense que c'est / c'était / ce sera ... (+ adjective – in bold) Je crois que c'est / c'était / ce sera ... (+ adjective – in bold) A mon avis, c'est / c'était / ce sera ... (+ adjective – in bold) Selon moi, c'est / c'était / ce sera ... (+ adjective – in bold) 😊 amusant, génial, relaxant, fatigant, intéressant, bon pour la santé, fantastique, super, excellent, incroyable, utile, inoubliable, éducatif, palpitant, divertissant ... 😞 ennuyeux, fatigant, nul, dangereux, inutile, mauvais pour la santé, agaçant, effrayant		

Verbs in the infinitive	Complements
danser – to dance / dancing	à la discothèque – at the disco
acheter – to buy / buying	des CDs (CDs) / des vêtements (clothes) / des jeux vidéo
jouer – to play / playing	au basket / au foot / au tennis / aux jeux vidéo / au cricket
regarder – to watch / watching	un film / la télé (tv) / des vidéos sur youtube
écouter – to listen / listening	de la musique (music)
manger – to eat / eating	un grand repas (a big meal) / au restaurant / une pizza
nager – to swim / swimming	à la piscine (in the swimming pool) / dans la mer (in the sea)
visiter – to visit / visiting	des monuments historiques (historic monuments)
rester – to stay / staying	à la maison (at home)
bavarder – to chat / chatting	avec mes copains sur MSN / au téléphone
travailler – to work / working	dans le jardin (in the garden)
boire – to drink / drinking	de la limonade / un coca (a coke) / de l'eau (water)
faire – to do / doing	mes devoirs (my homework) / du vélo (cycling)
lire – to read / reading	un livre (a book) / un journal (a newspaper)
dormir – to sleep / sleeping	dans mon lit (in my bed)
aller – to go / going	au cinéma (to the cinema) / au parc / au centre commercial
sortir – to go out / going out	avec mes copains (with my friends) / avec ma famille

Verb endings in all tenses:

In French, there are 3 groups of verbs:

1. Verbs ending in -er Eg. jouer – to play
2. Verbs ending in -ir Eg. choisir – to choose
3. Verbs ending in -re Eg. entendre – to hear

Infinitive	present	past	future simple (will)	future progressive (going to)	conditional
-er e.g. jouer	1) take away –er ending 2) add je-e tu-es il/elle-e nous-ons vous-ez ils/elles-ent	1) take away –er ending 2) add j'ai-é tu as-é il/elle a-é nous avons-é vous avez-é ils ont-é	1) take away –er ending 2) add je-erai tu-eras il/elle-era nous-erons vous-erez ils / elles-eront	1) use verb aller 2) add infinitive je vais + infinitive tu vas + infinitive il/elle va + infinitive nous allons + infinitive vous allez + infinitive ils/elles vont + infinitive	1) take away –er ending 2) add je-rais tu-rais il/elle-rait nous-rions vous-riez ils / elles-raient
-ir e.g. choisir	1) take away –ir ending 2) add je-is tu-is il/elle-it nous-issons vous-issez ils/elles-issent	1) take away –ir ending 2) add j'ai-i tu as-i il/elle a-i nous avons-i vous avez-i ils ont-i	1) take away –ir ending 2) add je-irai tu-iras il/elle-ira nous-irons vous-irez ils / elles-iront	1) use verb aller 2) add infinitive je vais + infinitive tu vas + infinitive il/elle va + infinitive nous allons + infinitive vous allez + infinitive ils/elles vont + infinitive	1) take away –ir ending 2) add je-irais tu-irais il/elle-irait nous-irions vous-iriez ils / elles-iraient
-re e.g. vendre	1) take away –re ending 2) add je-s tu-s il/elle-t nous-ons vous-ez ils/elles-ent	1) take away –re ending 2) add j'ai-u tu as-u il/elle a-u nous avons-u vous avez-u ils ont-u	1) take away –re ending 2) add je-rai tu-ras il/elle-ra nous-rons vous-rez ils / elles-ront	1) use verb aller 2) add infinitive je vais + infinitive tu vas + infinitive il/elle va + infinitive nous allons + infinitive vous allez + infinitive ils/elles vont + infinitive	1) take away –re ending 2) add je-rais tu-rais il/elle-rait nous-rions vous-riez ils / elles-raient

Careful with these irregular verbs !

Infinitif	Présent	Passé	Futur simple (will)	Futur proche (going to)
avoir – to have	j'ai tu as il/elle a nous avons vous avez ils/elles ont	j'ai eu tu as eu il/elle a eu nous avons eu vous avez eu ils/elles ont eu	j'aurai tu auras il/elle aura nous aurons vous aurez ils/elles auront	je vais avoir tu vas avoir il/elle va avoir nous allons avoir vous allez avoir ils vont avoir
être – to be	je suis tu es il/elle est nous sommes vous êtes ils/elles sont	j'ai été tu as été il/elle a été nous avons été vous avez été ils/elles ont été	je serai tu seras il/elle sera nous serons vous serez ils/elles seront	je vais être tu vas être il/elle va être nous allons être vous allez être ils vont être
aller – to go	je vais tu vas il/elle va nous allons vous allez ils/elles vont	je suis allé tu es allé il/elle est allé nous sommes allés vous êtes allés ils/elles sont allés	j'irai tu iras il/elle ira nous irons vous irez ils/elles iront	je vais aller tu vas aller il/elle va aller nous allons aller vous allez aller ils vont aller
sortir – to go out	je sors tu sors il/elle sort nous sortons vous sortez ils/elles sortent	je suis sorti tu es sorti il/elle est sorti nous sommes sortis vous êtes sortis ils sont sortis	je sortirai tu sortiras il/elle sortira nous sortirons vous sortirez ils/elles sortiront	je vais sortir tu vas sortir il/elle va sortir nous allons sortir vous allez sortir ils vont sortir
faire – to do	je fais tu fais il/elle fait nous faisons vous faites ils/elles font	j'ai fait tu as fait il/elle a fait nous avons fait vous avez fait ils/elles ont fait	je ferai tu feras il/elle fera nous ferons vous ferez ils/elles feront	je vais faire tu vas faire il/elle va faire nous allons faire vous allez faire ils vont faire
lire – to read	je lis tu lis il/elle lit nous lisons vous lisez ils/elles lisent	j'ai lu tu as lu il/elle a lu nous avons lu vous avez lu ils/elles ont lu	je lirai tu liras il/elle lira nous lirons vous lirez ils/elles liront	je vais lire tu vas lire il/elle va lire nous allons lire vous allez lire ils vont lire
dire – to say / to tell	je dis tu dis il/elle dit nous disons vous dites ils/elles disent	j'ai dit tu as dit il/elle a dit nous avons dit vous avez dit ils ont dit	je dirai tu diras il/elle dira nous dirons vous direz ils diront	je vais dire tu vas dire il/elle va dire nous allons dire vous allez dire ils vont dire
boire – to drink	je bois tu bois il/elle boit nous buvons vous buvez ils/elles boivent	j'ai bu tu as bu il/elle a bu nous avons bu vous avez bu ils/elles ont bu	je boirai tu boiras il/elle boira nous boirons vous boirez ils/elles boiront	je vais boire tu vas boire il/elle va boire nous allons boire vous allez boire ils vont boire

Modern Foreign Languages - French

prendre – to take apprendre – to learn follows the same pattern	je prends tu prends il/elle prend nous prenons vous prenez ils/elles prennent	j'ai pris tu as pris il/elle a pris nous avons pris vous avez pris ils/elles ont pris	je prendrai tu prendras il/elle prendra nous prendrons vous prendrez ils/elles prendront	je vais prendre tu vas prendre il/elle va prendre nous allons prendre vous allez prendre ils vont prendre
mettre – to put	je mets tu mets il/elle met nous mettons vous mettez ils/elles mettent	j'ai mis tu as mis il/elle a mis nous avons mis vous avez mis ils/elles ont mis	je mettrai tu mettras il/elle mettra nous mettrons vous mettrez ils mettront	je vais mettre tu vas mettre il/elle va mettre nous allons mettre vous allez mettre ils vont mettre
venir – to come	je viens tu viens il/elle vient nous venons vous venez ils viennent	je suis venu tu es venu il/elle est venu nous sommes venu(e)s vous êtes venu(e)s ils/elles sont venu(e)s	je viendrai tu viendras il/elle viendra nous viendrons vous viendrez ils/elles viendront	je vais venir tu vas venir il/elle va venir nous allons venir vous allez venir ils vont venir
vouloir – to want	je veux tu veux il/elle veut nous voulons vous voulez ils/elles veulent	j'ai voulu tu as voulu il/elle a voulu nous avons voulu vous avez voulu ils/elles ont voulu	je voudrai tu voudras il/elle voudra nous voudrions vous voudrez ils/elles voudront	je vais vouloir tu vas vouloir il/elle va vouloir nous allons vouloir vous allez vouloir ils vont vouloir
pouvoir – to be able to	je peux tu peux il/elle peut nous pouvons vous pouvez ils/elles peuvent	j'ai pu tu as pu il/elle a pu nous avons pu vous avez pu ils/elles ont pu	je pourrai tu pourras il/elle pourra nous pourrions vous pourrez ils/elles pourront	je vais pouvoir tu vas pouvoir il/elle va pouvoir nous allons pouvoir vous allez pouvoir ils vont pouvoir
savoir – to know	je sais tu sais il/elle sait nous savons vous savez ils/elles savent	j'ai su tu as su il/elle a su nous avons su vous avez su ils/elles ont su	je saurai tu sauras il/elle saura nous saurons vous saurez ils/elles sauront	je vais savoir tu vas savoir il/elle va savoir nous allons savoir vous allez savoir ils vont savoir

Modern Foreign Languages - French

Link Words / Connectives:

adding	et ou – or aussi de plus – furthermore en outre – besides au fait – in fact
cause and effect	parce que / car – because à cause de – because of donc – so ainsi / that way comme – as c'est pour ça que – that is why par conséquent – consequently cela cause – this causes c'est la raison pour laquelle – it's the reason why si – if alors – then grâce à/au/à la/aux – thanks to
sequencing	ensuite / et puis – then d'abord – first après cela – after that depuis (+expression of time) – since / for après (+expressions of time) – after premièrement / deuxièmement / troisièmement – firstly / secondly / thirdly finalement – finally pour finir – to finish pendant ce temps – in the meantime en même temps – at the same time
contrasting	même si – even if par contre/cependant – however en revanche – on the other hand au lieu de (+infinitive) – instead of à part – apart from malgré – despite tandis que – whereas alors que / bien que – even though sauf – except
emphasising	surtout – above all / especially en particulier – in particular en effet – indeed
illustrating	par exemple – for example comme – as tel que – such as

Basic vocabulary in Spanish – Classroom language

Expresiones para usar en clase :

señor / señora / señorita	Sir / Mrs / Miss
gracias	thank you
de nada	you're welcome
por favor	please
disculpe	excuse me
lo siento	sorry
quisiera ...	I would like ...
he olvidado ...	I have forgotten ...
he perdido ...	I have lost ...
necesito ...	I need ...
... un / mi bolígrafo	... a/my pen
... du papel	... some paper
... un / mi cuaderno (nuevo)	... a new book / my book
... los / mis deberes	... the / my homework
... pegamento	... glue
... ayuda	... help
he terminado	I have finished
he ganado / hemos ganado	I have won / we have won
he perdido / hemos perdido	I have lost / we have lost
¿Puedo ...	Can I ...
... ir al servicio?	... go to the toilet?
... quitar mi suéter / jersey?	... take off my jumper?
... hablar en inglés?	... speak in English?
... levantarme?	... get up?
... cambiar de sitio?	... change seats?
... explicárselo a ...?	... explain it to ...?
... ayudar a ...?	... help ...?
no comprendo	I don't understand
¿Puede repetir, por favor ?	Can you repeat ?
¿Puede explicarlo (en inglés) ?	Can you explain it (in English)?
¿Lo copiamos ?	Do we copy it ?
¿Cómo se dice ... (en inglés / en español) ?	How do you say ... (in English/in French) ?
¿Qué significa ... ?	What does ... mean ?
Llego tarde porque ...	I am late because ...
... el autobús llegó con retraso.	... the bus was late
... me levantado tarde.	... I got up too late
... no he escuchado el despertador.	... I did not hear my alarm
... estaba hablando con el señor / la señorita I was talking to Mr / Ms ...
Lee	read!
Copia	copy!
Escribe	write!
Escucha	listen!
Pega	stick!
Levántese	get up!
Siéntate	sit down!
Levanta la mano	raise your hand!
Sacad las cosas	get your things out!
Recoged las cosas	pack up!

Basic Vocabulary in Spanish

Numbers 1 - 100

1 uno	11 once	21 veintiuno	36 treinta y seis	70 setenta
2 dos	12 doce	22 veintidós	37 treinta y siete	90 noventa
3 tres	13 trece	23 veintitrés	38 treinta y ocho	100 cien
4 cuatro	14 catorce	24 veinticuatro	39 treinta y nueve	200 dos cientos
5 cinco	15 quince	30 treinta	40 cuarenta	300 tres cientos
6 seis	16 dieciséis	31 treinta y un	41 cuarenta y un	400 cuatro cientos
7 siete	17 diecisiete	32 treinta y dos	42 cuarenta y dos	...
8 ocho	18 dieciocho	33 treinta y tres	...	1000 mil
9 nueve	19 diecinueve	34 treinta y cuatro	50 cincuenta	2000 dos mil
10 diez	20 veinte	35 treinta y cinco	60 sesenta	3000 tres mil

ser / estar – to be

soy / estoy – I am

eres / estás – you are

es / está – he/she/it is

somos / estamos – we are

sois / estáis – you are (plural or formal)

son / están – they are

tener – to have

tengo – I have

tienes – you have

tiene – he/she has

tenemos – we have

tenéis – you have (plural or formal)

tienen – they have

Key verbs to describe yourself and others:

	Yo - I	él / e lla – he/she	ellos / ellas - they
Name	me llamo	se llama	se llaman
Age	tengo ... años	tiene ... años	tienen ... años
Birthday	mi cumpleaños es el (day) de (month) ...	su cumpleaños es el (day) de (month) ...	su cumpleaños es el (day) de (month) ...
Live	vivo en ...	vive en ...	viven en ...
Nationality/ personality	soy ...	es ...	son ...
Country of birth	nací en ...	nació en ...	nacieron en ...
Hair	tengo el pelo ...	tiene el pelo ...	tienen el pelo ...
Eyes	tengo los ojos ...	tiene los ojos ...	tienen los ojos ...

Impersonal verbs

present	past	future	conditional
es / no es – it's / it's not	era / no era – it was / it was not	será / no será – it will be / it will not be	sería / no sería – it would be / it would not be
hay / no hay – there is / there isn't	había / no había – there was / there wasn't	habrá / no habrá – there will be / there will not be	habría / no habría – there would be / there would not be
se puede / no se puede – one can / one cannot	se podía / no se podía – one could / one could not	se podrá / no se podrá – one will be able to / one will not be able to	se podría / no se podría – one would be able to / one would not be able to

Opinion starters

me parece que	me gusta	me mola
pienso que	no me gusta	me interesa
creo que	me encanta	me apasiona
según yo	odio	estoy loco/a por
En mi opinión	prefiero	no soporto / no aguanto

English KS3 - Year 7

- Year 7 students begin the Year with “Power,” reading Suzanne Collins’ The Hunger Games. Students will study narrative, archetypes, setting, character, and the conventions of such fiction.
- From January, students study “Gothic Mystery”. They read a range of gothic writing texts, including literary non-fiction. Moving through the term, students shift focus towards the ‘Detective’ genre, reading Agatha Christie and mystery themed poetry.
- The year concludes with Shakespeare’s Romeo & Juliet focusing on the impact of Elizabethan culture and patriarchy on Gender and Relationships in the play.

Term	Unit of workA	ssessment
Autumn 1	Power in The Hunger Games	Reading
Autumn 2	Power in The Hunger Games	Reading
Spring 1G	Gothic MysteryW	riting
Spring 2D	Detective storiesR	eading
Summer 1	Relationships in Romeo and JulietR	eading
Summer 2	Relationships in Romeo and JulietR	eading

English - Year 8

- Year 8 students begin the Year with “Against all odds”, a study of Oliver Twist and 19th Century literature in order to develop their understanding of how writers use language and style to present Victorian hardships.
- From January students study “Ancient Tales.” We read a range of international myths ranging from classical Greek mythology to lesser known folktales. Students study the codes and conventions of writing myths, culminating in writing their own, original myth.
- The year concludes by exploring “Culture and Identity” through the analysis of poetry and prose. Students deepen their understanding of diversity and identity while developing their reading skills.

Term	Unit of workA	ssessments
Autumn 1	Against all odds: Oliver Twist	Reading
Autumn 2	Against all odds: Oliver Twist	Reading
Spring 1A	ncient Tales	Writing
Spring 2A	ncient Tales	Writing
Summer 1	Culture and IdentityR	eading
Summer 2	Culture and IdentityR	eading

English – Year 9

- Year 9 students begin the Year with “Knowledge and Discovery”, by studying ‘Frankenstein’ written by Mary Shelly. Students explore how genre and contextual factors helped to shape a literary masterpiece.
- From January students read A View From the Bridge by Arther Miller. Through reading the play and engaging with its themes “Facing Obstacles” students turn their critical thinking to crafting stronger arguments in debates and writing.
- The year concludes with “The Power of Deception”. Students study Shakespeare’s Othello, exploring themes of manipulation, loyalty and deception while building their knowledge of the social and historical contexts of the play.

Term	Unit of workA	ssessments
Autumn 1	Knowledge and Discovery: Frankenstein	Reading
Autumn 2	Knowledge and Discovery: Frankenstein	Reading
Spring 1	Facing Obstacles: A View From The Bridge	Writing
Spring 2	Facing Obstacles: A View From The Bridge	Writing
Summer 1	The Power of Deception: Othello	Reading
Summer 2	The Power of Deception: Othello	Reading

English KS4

Exam Board: AQA

The new GCSE specification for English (AQA) will enable students of all abilities to develop the skills they need to read, understand and analyse a wide range of different texts covering the 19th, 20th and 21st century time periods as well as to write clearly, coherently and accurately using a range of vocabulary and sentence structures.

English Language Paper 1: Explorations in Creative Reading and Writing

Paper 1 (two)	Paper 2 (compulsory)
Paper 1N 19th-century novel – A Christmas Carol 30 marks (AO1, AO2, AO3)	Section A Shakespeare – Macbeth 30 marks (AO1, AO2, AO3) + 4 marks (AO4)
Paper 1M Modern prose/drama – An Inspector Calls 30 marks (AO1, AO2, AO3)	Section B Part 1: unseen poem essay 24 marks (AO1, AO2) + 4 marks (AO4) Part 2: unseen poetry comparison 8 marks (AO2)

English Literature Paper 1:

How it’s assessed

- 1 hour 45 minute written exam, 64 marks, 40% of GCSE

Exam Questions:

Section A

In Section A, students will respond to a Shakespeare play that they have been taught in preparation for the examination. The paper will contain an extract about which students will need to write and then use this as a springboard to branch out across the rest of the text. The specific focuses for each year will be announced in the Spring term.

Section B

This section will focus on the study of a 19th Century novel: like Section A, students will respond to one question based on a book that they have read in preparation for the examination. Again, they will be required to write about an extract from the novel and then use this as the basis for a discussion about the whole text.

English Literature Paper 2:

How it’s assessed

- 2 hour 15 minute written exam, 96 marks, 60% of GCSE

Exam Questions

Section A

Modern texts: students will answer one essay question from a choice of two on their studied modern prose or drama text.

Section B

Poetry: students will answer one comparative question on one named poem printed on the paper and one other poem from their chosen anthology cluster.

Section C

Unseen poetry: students will answer one question on each of two unseen poems and one comparative question.

Year 10 Long term overview:

Term	Unit of workA	ssessments
Autumn 1	An Inspector Calls	Literature
Autumn 2	A ChristmasCarol	Literature
Spring 1M	acbethL	iterature
Spring 2M	acbethL	iterature
Summer 1	Language Paper 1	Language
Summer 2	Unseen Poetry	Literature






Year 11 Long term overview:

Term	Unit of workA	ssessments
Autumn 1	Language Paper 2	Language
Autumn 2	Love & Relationship poemsL	iterature
Spring 1R	evision - Unseen	Literature
Spring 2	Revision - Lit P1 (Macbeth & A Christmas Carol)	Literature
Summer 1	Revision - Language P1 & P2	Language
Summer 2		

The Elements of Music











DR. SMITH

- D** **Dynamics** Volume in music e.g. Loud (Forte) & Quiet (Piano).
Duration The length of notes, how many beats they last for. Link this to the time signature and how many beats in the bar.
- R** **Rhythm** The effect created by combining a variety of notes with different durations. Consider syncopation, cross rhythms, polyrhythm's, duplets and triplets.
- S** **Structure** The overall plan of a piece of music, e.g Ternary ABA and Rondo ABACAD, verse/chorus.
- M** **Melody** – The effect created by combining a variety of notes of different pitches. Consider the movement e.g steps, skips, leaps.
Metre – The number of beats in a bar e.g 3/4, 6/8 consider regular and irregular time signatures e.g. 4/4, 5/4.
- I** **Instrumentation** – The combination of instruments that are used, consider articulation and timbre e.g staccato, legato, pizzicato.
- T** **Texture** – The different layers in a piece of music e.g polyphonic, monophonic, thick, thin.
Tempo – The speed of the music e.g. fast (Allegro), Moderate (Andante), & slow (Lento / Largo).
Timbre – The tone quality of the music, the different sound made by the instruments used.
Tonality – The key of a piece of music e.g Major (happy), Minor (sad), atonal.
- H** **Harmony** – How notes are combined to build up chords. Consider concords and discords.

American / German note names	British note names	Note symbols	Note value
Whole note	Semibreve		4 beats
Half note	Minim		2 beats
Quarter note	Crotchet		1 beat
Eighth note	Quaver		1/2 of a beat
Sixteenth note	Semiquaver		1/4 of a beat

Two musical staves are shown, each with a treble clef. The first staff is labeled 'SPACE' and 'LINE' above it. It contains the lyrics 'ALL COWS EAT GRASS GOOD BUDDIES DON'T FLY AWAY'. The second staff is also labeled 'SPACE' and 'LINE' above it. It contains the lyrics 'F A C E EVERY GREEN BUS DRIVES FAST'. Both staves have a single note on each line of the staff, representing the pitch of the words.

The Rhythm Tree

NOTES	RESTS (silences in music)
 Semibreve = 4 beats	 Semibreve rest = 4 beats
 Minim = 2 beats	 Minim rest = 2 beats
 Crotchet = 1 beat	 Crotchet rest = 1 beat
 Quaver = 1/2 beat	 Quaver rest = 1/2 beat
 Semiquaver = 1/4 beat	 Semiquaver rest = 1/4 beat

ROLE OF A SCRIPT DESIGNER

READS THE SCRIPT → IDENTIFY THEMES DISCUSS WITH DIRECTOR

COLLABORATE WITH DIRECTOR

NEED TO HAVE CLEAR UNDERSTANDING OF THE DIRECTOR'S CONCEPT

INTERCHANGEABLE

LIST THE THEMES PRESENT
 OF ALL THE THEMES, WHICH IS MOST SIGNIFICANT?
 (Icons: Romance, Drama, Comedy)

#1
 WHAT IS THE FIRST THING YOU THINK OF?
 • IMAGE
 • COLOUR
 • OBJECT

MOOD BOARD
 REMEMBER, IT CAN INCLUDE ANYTHING RELATED TO THE MOOD

LIST
 ALL THE THINGS THAT MAKE YOU FEEL YOUR IDEALISED MOOD

FIND
 IMAGES/TEXT/TEXTURES/ANIMICS OF ALL THE THINGS ON YOUR LIST

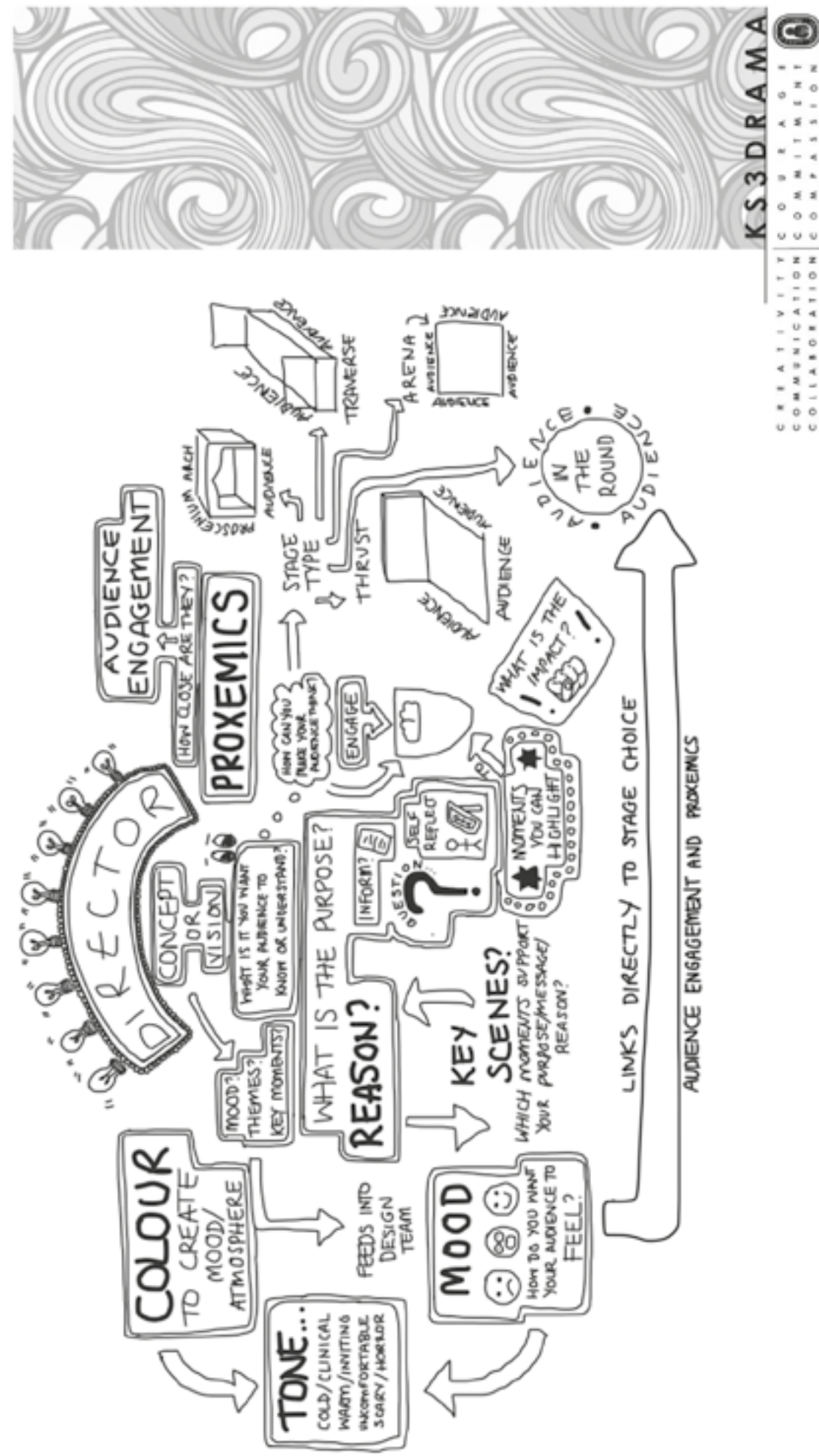
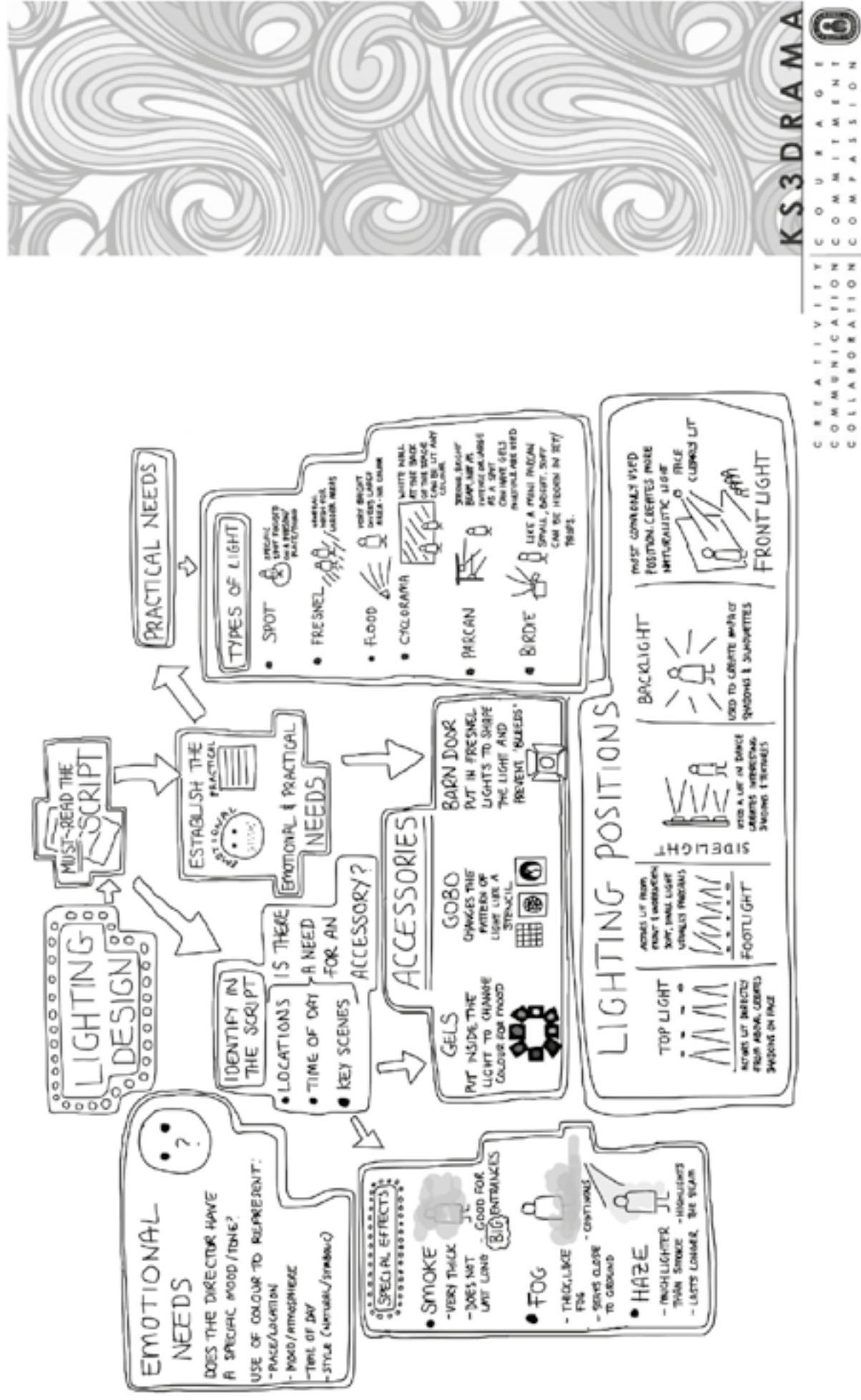
FACTUAL VS EMOTIONAL
 WHAT ARE THE FACTUAL NEEDS OF THE SCRIPT?
 WHAT ARE YOUR EMOTIONAL RESPONSES?

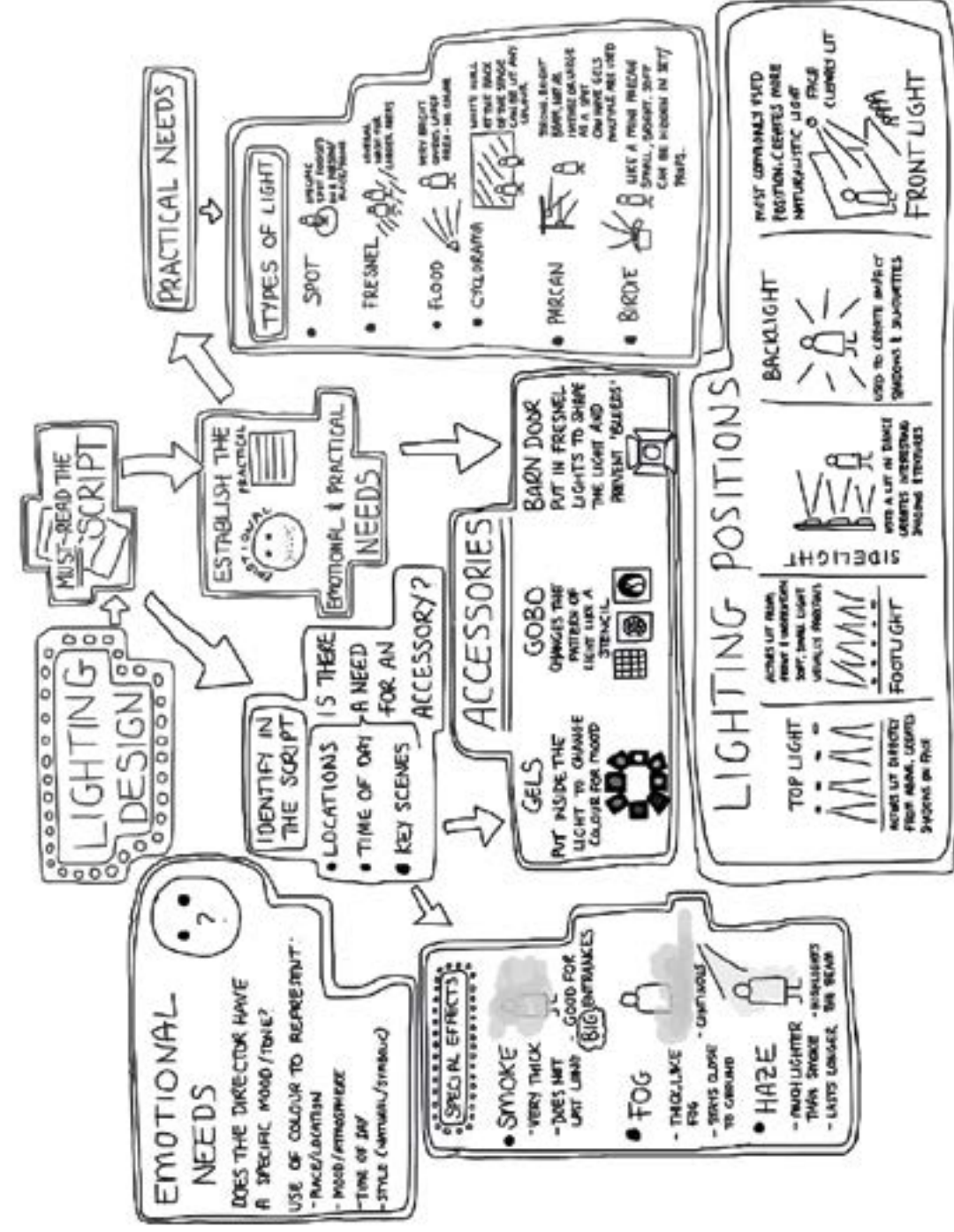
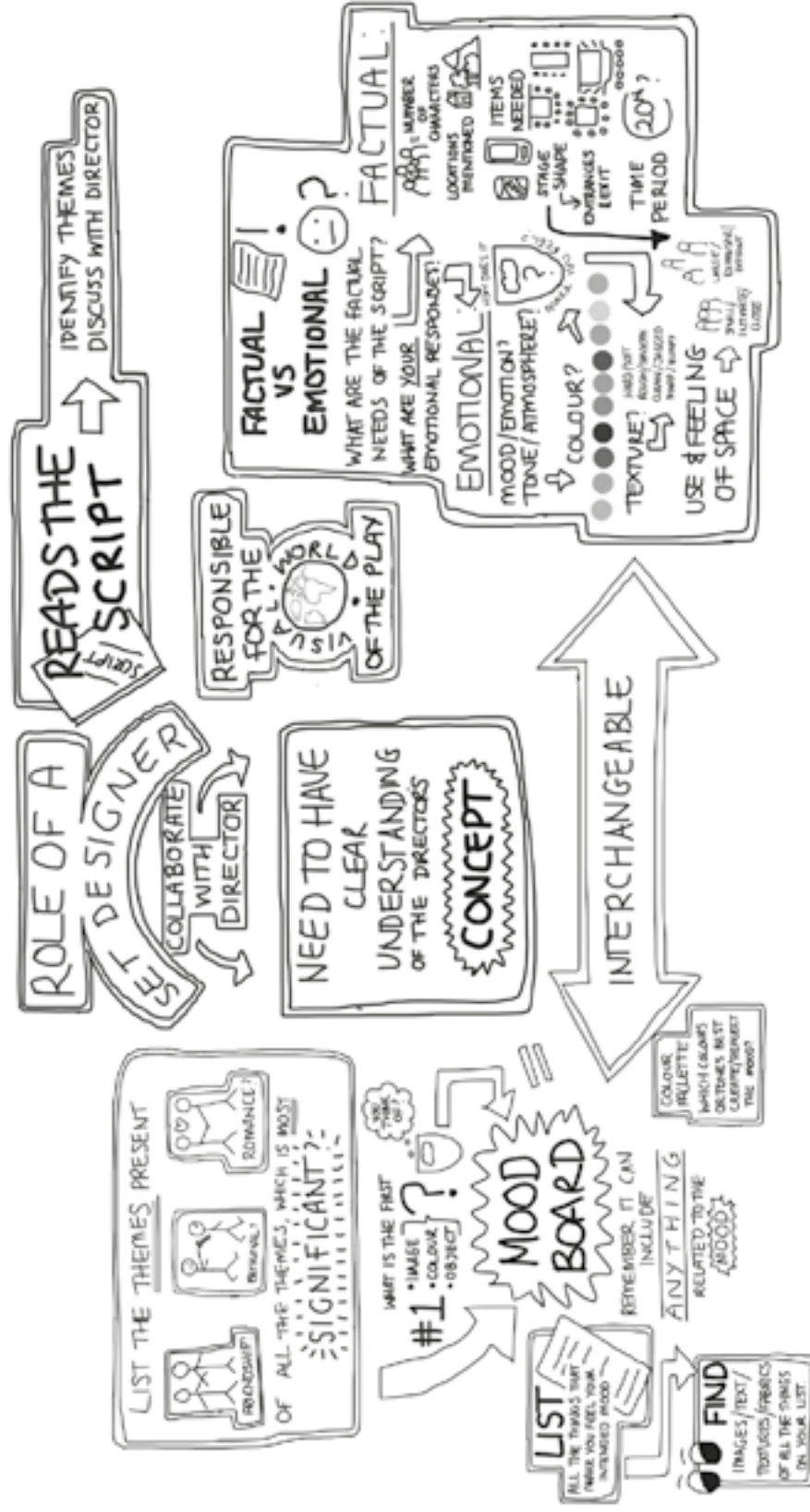
FACTUAL:
 PLOT = NUMBER OF CHARACTERS
 LOCATIONS MENTIONED
 ITEMS NEEDED
 STAGE
 CHANGES
 PERIOD
 TIME PERIOD

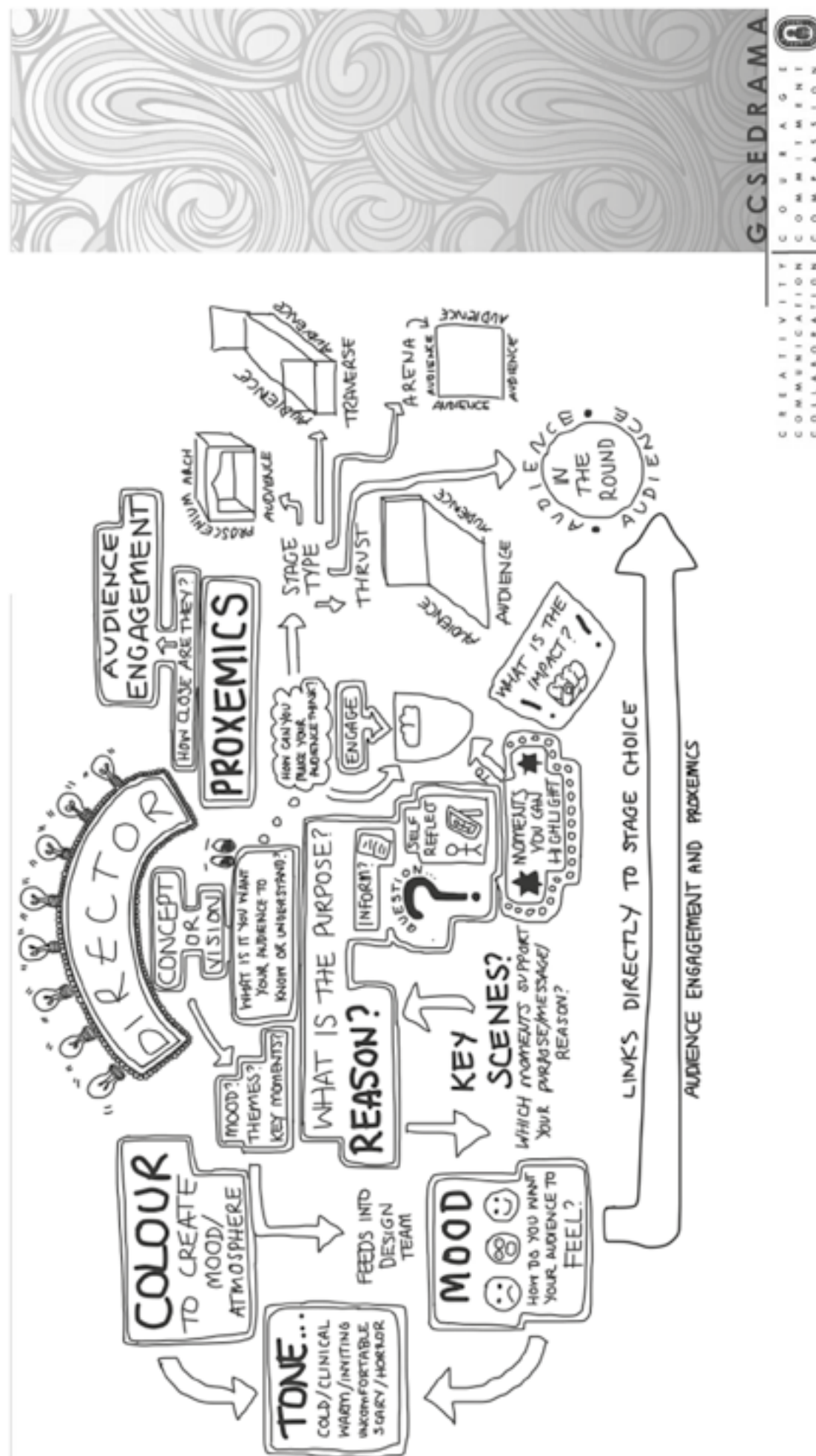
EMOTIONAL:
 MOOD/EMOTION?
 TONE/ATMOSPHERE?
 COLOUR?
 TEXTURE?
 USE & FEELING OF SPACE

RESPONSIBLE FOR THE REAL WORLD OF THE PLAY

COLOUR PALETTE
 WHICH COLOURS ON TENDS BEST CREATIVELY/ARTISTICALLY THIS MOOD?







Computer Science Terms

Algorithm: A series of steps designed to solve a mathematical or other problem.

Assembler: a program that translates assembly code into machine code

ASCII: is a 7-bit character set consisting of 128 different letters, numbers or punctuation symbols

Arithmetic and Logic Unit (ALU): is the part of the CPU where arithmetic (add, subtract etc) and logic (AND, OR, NOT etc) operations are carried out.

Augmented reality: A view of a physical, real world environment that has been enhanced with virtual elements.

Binary: A number system based on 2, using just two symbols: 0 and 1.

Boundary data: is data at the limit of what a program should be able to handle

Clock speed: the number of instructions the CPU can carry out in 1 second.

Command line interface: where the user has to type in all of the commands for the operating system themselves instead of using a GUI. The user has to type in all of the commands for the operating system instead of using a mouse to point at and select menu options or double-clicking on icons.

Bit depth: The number of bits used to store each sound sample.

Computer architecture: The internal, logical structure and organisation of the computer hardware.

Concatenation: the placing together of two separate objects so that they can be treated as one. e.g. two string variables can be joined end-to-end to produce a larger string.

Constant: A label referring to a location in memory containing a value that can be accessed but not changed by a program.

Control unit: The control unit controls the flow of data both in and around the central processing unit.

Copyright: this is a law protecting the rights of the person who created their work.

Defragmenter: Software that brings together fragments of files on a disk and collects all the free space in one area.

Digital divide: is the social and economic gap between those who have access to computer technology and those who do not.

Domain Name Server: links the Internet Protocol address of a computer on a network to a text-based website address that is easier to remember.

Encryption: is the conversion of important data, using a public encryption key, into a form that cannot be read without a private key

Extended Ascii: An 8-bit character set consisting of 256 characters.

Defragmentation: software analyses data and how it is stored on a disk. It then rearranges the data into a more logical sequence for faster access

Hexadecimal: A number system based on 16 that uses the symbols 0-9 and A-F (to represent the denary values 0-15)

HTTPS: encrypts communication between the server and the client to enable secure online transactions.

Incremental backup: only new files or files that have been changed since the last backup

Iteration (repetition): Where a group of instructions is executed repeatedly until a condition is met, or while a condition is true (a loop)

Logic gate: An elementary building block of a digital circuit. Most logic gates have two inputs and one output.

Open source: software whose source code is available for modification or enhancement by anyone, e.g. open office, Linux, android.

Packet switching: when certain areas of the network are too busy to carry the packets, they are automatically switched to emptier circuits.

Pseudocode: a language that is similar to a real programming language, but it is easier for humans to understand although it doesn't actually run on a computer. It can easily be converted to a regular programming language.

Register: A place in a CPU where data currently being used can be stored temporarily.

Run-time environment allows a program to be run and tested within an integrated development environment (IDE)

Sampling: making a physical measurement at set time intervals and then converting the measurements to digital values

Selection: A condition to decide the path through the program and which set of instructions to execute next.

Social engineering: psychologically tricking people into divulging their secret information or doing things that they wouldn't otherwise do

Static array: an array that is of a set size

Subroutines: self-contained modules of code that can be 'called' by the main program when they are needed

Topology: the physical structure and layer of a network

Truth tables: are the representation of potential inputs and outputs (1s and 0s) in a logic diagram.

Unicode: A character set that uses code pages to provide a range of language symbols. There are several billion possible character codes available to unicode.

Variable: A label that refers to a location in memory containing a value that can be accessed and changed by a program.

Virus: A piece of code capable of copying itself, which may damage a system by corrupting or destroying data.

Validation: the process through which the program checks that data

Wide area network (WAN): a network of networks connecting local area networks over a large geographical area.

Unicode was developed to set worldwide common coding standards and to represent all known languages

Computer science Procedural knowledge

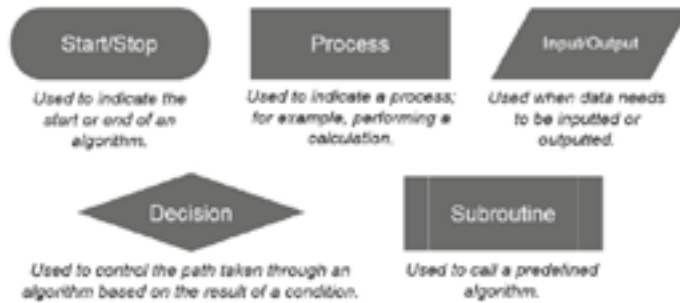
The AND logic gate is represented by the symbol:



The OR logic gate is represented by the symbol:



The NOT logic gate is represented by the symbol:



Data types

Data type	Description	Example data
Integer	These are whole numbers only	0, 1, 2, 3
Real	These are numbers that can have a decimal part as well	0.1, 1.2, 3.4
Boolean	This has two values only, true and false	True/False, 1/0, Y/N
Character	This is a single letter, number or symbol	A, B, C
String	This is used for text, and can include any character	Computer Science is fun!

Binary Place values

128	64	32	16	8	4	2	1
-----	----	----	----	---	---	---	---

Binary Addition rules

0 + 0 = 0
 1 + 0 = 1
 1 + 1 = 10 (binary for denary 2)
 1 + 1 + 1 = 11 (binary for denary 3)

Hexadecimal

Decimal	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Hexadecimal	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F

Colour Depth

One bit per pixel (0 or 1) - two possible colours
 Two bits per pixel (00 to 11) - four possible colours
 Three bits per pixel (000 to 111) - eight possible colours
 Four bits per pixel (0000 to 1111) - 16 possible colours
 16 bits per pixel (0000 0000 0000 0000 to 1111 1111 1111 1111) - over 65,000 possible colours

Calculating bitmap file size

The image resolution is the size of a bitmapped graphic in pixels. It is calculated by multiplying the width (in pixels) by the height (in pixels) of an image.
 To find the size of an image file, you multiply the resolution of the image by the colour depth:
 Image file size (in bits) = width (in pixels) × height (in pixels) × colour depth / 8

Sound Bit depth formula

no of channels × sampling rate × length of the sound (seconds) × sample resolution
 Bit rate = number of channels × sample rate × bit depth (/ 8 for bytes)

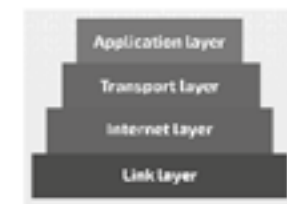
Testing Data

Validation rule	Description
Length check	Checks that the data entered contains a set number of characters
Range check	Checks that the data entered is within a certain number range
Type check	Checks that the data entered is a certain data type
Format check	Checks that the data entered has a particular format, e.g. has an @ symbol

Laws and Legislations

The Data Protection Act (2018) /GDPR
 The Computer Misuse Act (1990)
 The Copyright, Designs, and Patents Act (1988)
 Software licences - open source and proprietary
 Freedom of Information act
 Telecommunication security act

Network protocols & Layers



Protocol	Full name	Purpose
TCP/IP	Transmission Control Protocol/Internet Protocol	Used to send data across the internet and most LANs.
HTTP	Hypertext Transfer Protocol	Used by the World Wide Web to tell browsers and servers what to do.
HTTPS	Hypertext Transfer Protocol Secure	A secure (encrypted) version of HTTP.
FTP	File Transfer Protocol	Used to send documents and other files across a network.
POP	Post Office Protocol	An old protocol sometimes still used to retrieve e-mails from a mail server.
IMAP	Internet Message Access Protocol	Used to retrieve e-mails from a mail server over a TCP/IP connection.
SMTP	Simple Mail Transfer Protocol	Is used to send e-mails but is normally combined with POP or IMAP.

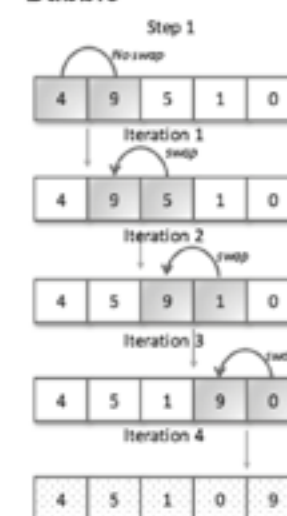
Statement	Description
variable = "data"	This allows us to declare a variable and assign data to it.
variable = input("user prompt")	This allows the user to input data and assign it to a variable.
print(variable)	This allows us to provide a user with an output that gets printed to the screen.
for i = 0 to 3 print(variable) next i	This allows us to create a counting loop so that we can perform a set of instructions a set number of times.
while variable == false variable = input("user prompt") endwhile	This allows us to create a condition loop where the condition is checked at the start of the loop.
do variable = input("user prompt") until variable == true	This allows us to create a condition loop where the condition is checked at the end of the loop.
if variable == 1 then print(1) elseif variable == then print(2) else print(0) endif	This allows us to create selection in our program. We can add multiple selection statements through the use of elseif.

<pre> switch variable: case 1: print(1) case 2: print(2) default: print(0) endswitch </pre>	<p>This allows us to create selection in our programming using a set number of options.</p> <p>We can add a default option to account for any inputs that do not match an option.</p>
<pre> function double(parameter) return parameter *2 endfunction calling: variable = double(argument) </pre>	<p>This allows us to store a set of instructions inside a function.</p> <p>We can then call the function and it will return a value.</p>
<pre> procedure name(parameter) instruction 1 instruction 2 endprocedure calling: name(argument) </pre>	<p>This allows us to store a set of instructions inside a procedure.</p> <p>We can then call the procedure any time we want to carry out the set of instructions.</p> <p>These differ from functions, as functions return a value.</p>

Statement	Description
<pre> array name[3] array name[3,5] name[0] = "entry1" name[1] = "entry2" name[0, 0] = "entry1" name[0, 1] = "entry2" print(name[1]) print(name[0, 1]) </pre>	<p>This allows us to create arrays. The first is a one-dimensional array, the second is a two-dimensional array.</p> <p>We can then assign, amend and extract values from each element in the array.</p>
<pre> file = openRead("text.txt") f = myfile.readline() file.close() file = openWrite("text.txt") f = myfile.writeline() file.close() </pre>	<p>These are the statements that are needed for file handling. They allow us to open the file in read mode, read from the file, and then close it.</p> <p>Or if you want to write to a file you can open the file in write mode, write to the file, and then close the file afterwards.</p>
<pre> variable.length variable.substring(start, noOfCharacters) </pre>	<p>These are string manipulation statements. They allow us to find out the length of a string.</p> <p>They also allow us to extract sections of characters out of a string.</p>

Sorting methods

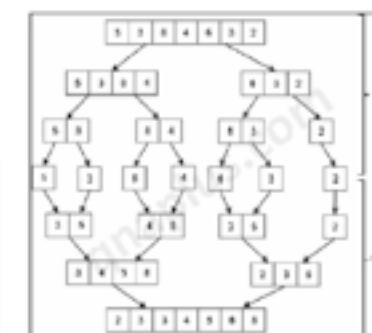
Bubble



Insertion

Sorted	Unsorted
	2 1 6 3 5 4
2	1 6 3 5 4
1 2	6 3 5 4
1 2 6	3 5 4
1 2 3 6	5 4
1 2 3 5 6	4
1 2 3 4 5 6	

Merge



Computing links

Type the titles and keywords below into a search engine to find relevant website.

- Bbc class clips-BBC Teach - computer science for 14-16 / 11-14
https://youtube.com/playlist?list=PLcvEcrrF_9zlr2pl_zleJAcX9ch5NZQ1
- <http://www.ictworkout.co.uk> find out username & password from teacher
- Studio code- binary game
- BBC Bitesize KS3
- BBC Bitesize KS4
- Wired magazine – Monthly magazine on the global impact of new technology
- BBC Click- topical reports on technology
- Computer science tutor youtube playlist
- Crash course computing youtube playlist
- Craig and Dave youtube playlist
- Revise computing youtube playlist
- Teaching computer science youtube playlist
- Isaac Computer science
- BBC Make it digital - world of digital in a major UK-wide initiative
- Oaks academy Computer science KS3
- Oaks academy Computer science KS4
- Computerpilgrimage youtube channel – Explore the inner working of computers
- Cambridge GCSE computing- cambridgegcseccomputing.org/
- <https://www.learn-html.org/>
- Tech advisor-<https://www.techadvisor.com/>
- Computer History Museum <https://computerhistory.org>
- Khan academy www.khanacademy.org/computing/computer-science
- <http://csunplugged.org>
- <http://www.cs4fn.org/magazine/> Computer science for fun- Queen Mary University

Learn to code

- Scratch Mit-<https://scratch.mit.edu/>
- LGFL python tutor-<http://python.lgfl.org.uk/>
- Code academy-<https://www.codecademy.com/learn/all>
- W3schools- tutorials to code websites-<https://www.w3schools.com/>
- Code.learn- <https://code.org/learn>

Business studies links

- BBC bite size - Business
- Business case studies-<https://businesscasestudies.co.uk/>
- BusinessEd- <https://www.businessed.co.uk>
- Bizzwizard playlist youtube
- 2 Teachers playlist youtube

Future Pathways

- Handshake website- helps college students get hired in firms. <https://joinhandshake.com/>
- GCHQ -national cyber security centre -CyberFirst courses, Girls Competition,Bursaries,apprenticeships,CyberFirst Schools/Colleges,CyberFirst resources, CyberSprinter https://www.ncsc.gov.uk/section/education-skills/schools#section_2
- <https://www.brightnetwork.co.uk/> - placements/ internships
- Accenture digital skills / Accenture futurelearn courses
- TED Talks – online lectures with prestigious speakers
- Women in Computer science-<https://www.computerscience.org/resources/women-in-computer-science/>
- Creative Industries http://creativeskillset.org/creative_industries/vfx/ways_into_the_industry
- TeenTech Live-<https://teentech.com/>
- BBC Make it Digital Traineeship
- Decoded apprenticeships-<https://decoded.com/apprenticeships/>
- Stem learning-<https://www.stem.org.uk/>
- BCS-The chartered institute for IT
- Openlearn- courses- The internet of everything, machines minds & computers, Living with the internet- keeping it safe, information on the web, protocols in networks
- IEEE spectrum - articles, blogs & videos about cutting edge technology

Computer science and Business studies resources and revision

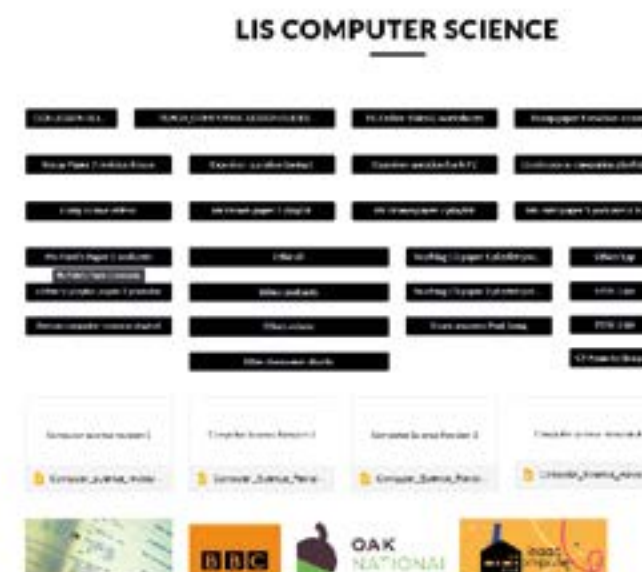
1. Log into RM Unify



2. Click on the computer science / Business tile



3. Access the resources , podcasts, videos and specifications.



OCR GCSE Business Studies Key Words	
Diversification	When a business merges with or takes over another business with which there is no connection
Dividend	The money paid to a shareholder from the profits of a limited company. This is the reward for the shareholder taking a risk by investing money in the company
Forwards vertical growth	When a business merges with, or takes over a business that it supplies good or services to
Horizontal growth	A merger or takeover where two businesses are involved in a similar operation, e.g. two electrical producers or two shops selling fashion clothing
Limited liability	Where the responsibility for the debts of a business is limited to the amount invested by a shareholder. A feature of private and public limited companies
Market share	The share of the total market for a product or service and is shown as a percentage
Merger	Where two or more businesses agree to join together
Organic growth	Growth of a business internally by increasing sales. Sales can be increased in a number of different ways
Stakeholders	Groups or individuals who have an interest in business
Unlimited liability	Where the responsibility for all the debts of a business rests with the owners of the business. A feature of sole traders and partnerships
Competitor Pricing	When a price is set based on prices charged by competitor businesses for a similar product
Cost-Plus Pricing	A pricing method that adds a percentage of profit to the total costs of making a product. This gives the selling price.
Penetration Pricing	When a price is set lower than the competitor businesses. Often used by new businesses to break into a market. This should only be seen as a short-term strategy
Point of Sale Promotions	Includes price reductions, loss leaders, competitions and free samples
Promotional Pricing	Where prices are reduced to give products a boost or to sell off old stock. Most commonly seen as sales in shops
Qualitative Data	Data based on opinions of those being asked
Quantitative Data	Data collected that is based on facts or numbers, usually easier to analyse than qualitative data
Off-the-Job Training	Occurs away from the job. It may still be at the same place of work, or the employee may be sent somewhere else for the training
On-the-Job Training	Occurs at the place of work and while the the worker is doing their job
Productivity	A measure of output per worker. It is the only way of measuring the performance of workers
Professional Development	Includes both vocational and academic development. It involves learning over a long period of time. Workers may learn through external courses with this learning being reinforced by practical activity in the workplace.
Retention	When workers can be kept employed by businesses rather than them leaving to work elsewhere
Labour	A factor of production. It is the labour employed by businesses to produce goods and services
Logistics	The management of the transportation and storage of goods
Procurement	The management of purchasing within a business
Proximity	Means 'nearness to'. It can refer to proximity to the market, to raw materials and to labour supplies
Quality Assurance	An approach that involves the whole business focusing on quality, thus aiming to prevent quality problems arising
Quality Control	A system for inspecting the quality of the goods or services produced and that they are of a good standard

Average Rate of Return (ARR)	A method of measuring and comparing the profitability of an investment over the life of the investment
Break-Even Forecast	A prediction about the break-even quantity based on estimates of future sales revenues and costs
Cash	Not simply notes and coins held in the business, but also money in a bank account
Cash Flow Forecast	A statement showing the expected flow of money into and out of a business over a period of time
Expenditure	Money that the business pays out
Expenses	The costs of operating a business
Fixed Costs	The costs that stay the same as output changes, for example, rent
Gross Profit	Sales minus the cost of sales
Interest	The amount of money that has to be paid on borrowed money
Income	Money that the business receives
Liquidity	The ability of a business to pay its short-term debts which must be paid in the near future
Loss	Occurs in a business when costs are greater than revenue
Net Profit	Gross profit minus the expenses of operating the business
Overdraft	An arrangement with a bank that a business can spend more money than it has in its account
Owners' Capital	Money from savings put in to the business by the owner
Profit	The revenue received by a business minus the costs of running the business
Profitability Ratios	Calculations such as gross profit margin and net profit margin which help to interpret data
Retained Profit	Profit that is not distributed to shareholders as dividend
Revenue	The money from sales
Sale of Assets	Items sold by the business
Share Issue	Money raised from investors by selling new shares
Total Costs	The addition of fixed and variable costs
Trade Credit	When the business has the goods to sell and agrees to pay at some time later
Variable Costs	The costs that change as output changes, for example, wages
Capital	Money or assets such as machines, buildings, vehicles
Economic Climate	Refers to how well the country is doing in terms of the levels of income and employment
Globalisation	The process by which business activity around the world has become increasingly interconnected
Gross Domestic Product (GDP)	A measure of how much a country produces in a year. It influences the level of income and employment
Multinational Companies	Businesses that operate in different countries around the world
Sustainable Production	When production does not lead to the depletion of natural resources
Trade	The import and export of goods and services
Waste Disposal	The process of getting rid of unwanted materials

Media GCSE Specialist Keywords

REPRESENTATION	TARGET AUDIENCE	INSTITUTION	LANGUAGE	CONTEXT
<ul style="list-style-type: none"> □ Synergy □ Discrimination □ Inequality □ Misrepresented □ Values & Beliefs □ Patriarchy □ Stereotypes □ Countertype □ Direct mode of address <p>Theories</p> <ul style="list-style-type: none"> □ Binary opposite □ Bell Hooks 'Colour codes' □ Objectification □ Zoonen □ Alvarado's ethnicity □ Star theory □ Male Gaze □ Verisimilitude □ Heteronormative □ Hypermasculinity □ Toxic masculinity □ Spomosexual 	<ul style="list-style-type: none"> □ Mass / Niche audience □ Mainstream or specialised audience □ Social class □ Age range □ Demographic □ Gender □ Ethnicity □ Active/ Passive audiences <p>Theories</p> <ul style="list-style-type: none"> □ Uses and Gratification <ul style="list-style-type: none"> > Identity > Escapism > Entertainment > Education > Interaction □ Zeitgeist □ Jenkin's Fandom □ 'Prosumer' □ Schadenfreude □ Maslow □ Cultivation □ Populist □ Reception □ Butler's 'gendered' □ Gauntlett's 'Identity' □ Hall's <i>Encoding / Decoding</i> 	<ul style="list-style-type: none"> □ Informative □ Entertainment □ Infotainment □ Brand □ Product □ Theme □ Endorsement □ Ownership □ Regulation □ Producers □ Consumers □ Conglomerates □ New technologies <p>Theories</p> <ul style="list-style-type: none"> □ Hegemony 	<ul style="list-style-type: none"> □ Mise-en-scene <ul style="list-style-type: none"> > Lighting > Camera Shot/Angles > Costume > Set design & props > Body and facial language □ Codes <ul style="list-style-type: none"> > Action > Enigma > Technical > Written > Audio > Symbolic > Cultural □ Denotations / Connotations □ Semantic Field □ Unique Selling Point □ Unconventional / Subvert □ Framing / Cropping □ Diegetic/non-diegetic sounds □ Juxtaposition □ Anchorage □ Message □ Typology □ Intertextuality □ Colour palette <p>Theories</p> <ul style="list-style-type: none"> □ Todorov's Narrative □ Semiotics / Signs □ Privileged spectator position 	<ul style="list-style-type: none"> □ Historical □ Gender □ Cultural □ Social □ Political <p>Theories</p> <ul style="list-style-type: none"> □ Genre Theory □ Marxist □ Feminist □ Neales □ 3rd wave feminism □ 4th wave feminism

Term	Formulae
(Total) sales revenue	Price x quantity
(Total) variable costs	Variable costs per unit x quantity
Variable costs (per unit)	$\frac{\text{Total variable costs}}{\text{quantity}}$
(Total) fixed costs	Sum of all the fixed costs
Average fixed costs	$\frac{(\text{Total}) \text{ Fixed costs}}{\text{quantity}}$
Total costs	(Total) variable costs + (total) fixed costs
Profit/loss	Total revenue – total costs
Gross profit	Total revenue – cost of sales
Gross profit margin	$\frac{\text{Gross profit}}{\text{Total revenue}} \times 100$
Net profit	Total revenue – cost of sales - expenses
Net profit margin	$\frac{\text{Net profit}}{\text{Total revenue}} \times 100$

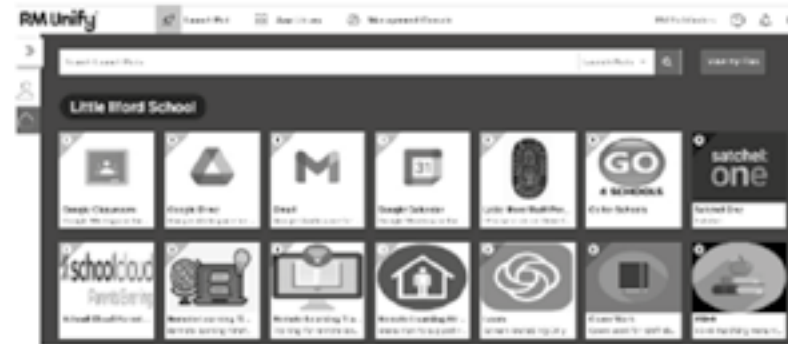
Term	Definition	
Break-even	The point where all the total costs are covered by the total revenue	Occurs where total revenue = total costs
Break-even quantity	The number of units a business needs to sell to cover total costs with the total revenue.	$\frac{\text{Fixed costs}}{\text{Price} - \text{variable cost (per unit)}}$

Term	Formulae
Total profit from the investment	Total income received from an investment over a given period of time – cost of the investment
Average profit from the investment	$\frac{\text{Total profit from the investment}}{\text{Number of years}}$
Average rate of return	$\frac{\text{Average profit from the investment}}{\text{Cost of the investment}} \times 100$

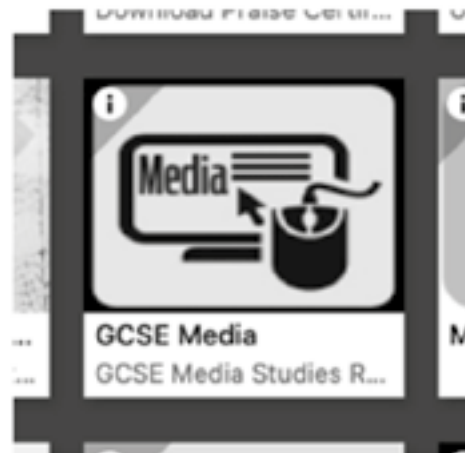
Media

Course outline and resources at:
<https://sites.google.com/littleilford.org/mediastudiesexamrevision/>

1. Log into RM Unify



2. Click on the Media tile



3. Access the Media Studies GCSE website



Mathematics - shape & space

An acute angle is less than 90°

A right angle is 90°

An obtuse angle is more than 90° and less than 180°

A straight angle is 180°

A reflex angle is more than 180°

Around a point is 360°

The angles in a triangle add up to 180°

Angles in a quadrilateral add up to 360°

Vertically opposite angles are equal

Alternate angles are the same

Corresponding angles are the same

Supplementary angles add up to 180°

Trigonometry

Pythagoras' theorem
 $c^2 = a^2 + b^2$

$\sin \theta = \frac{O}{H} = \frac{\text{opposite}}{\text{hypotenuse}}$ SOH

$\cos \theta = \frac{A}{H} = \frac{\text{adjacent}}{\text{hypotenuse}}$ CAH

$\tan \theta = \frac{O}{A} = \frac{\text{opposite}}{\text{adjacent}}$ TOA

Remember! SOH CAH TOA

Sine law
 $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

Cosine law
 $a^2 = b^2 + c^2 - 2bc \cos A$
 $b^2 = a^2 + c^2 - 2ac \cos B$
 $c^2 = a^2 + b^2 - 2ab \cos C$

Area of a triangle $= \frac{1}{2} ab \sin C$

Perimeter, area & volume

Rectangle
 Perimeter $= 2(l+w)$
 Area $= l \times w$

Parallelogram
 Perimeter $= 2(a+b)$
 Area $= b \times h$

Cuboid
 Volume $= l \times w \times h$

Prism
 Volume $= \text{cross section area} \times l$

Triangle
 Perimeter $= a+b+c$
 Area $= \frac{b \times h}{2}$

Circle
 Circumference $= 2\pi r$
 Area $= \pi r^2$

REMEMBER!

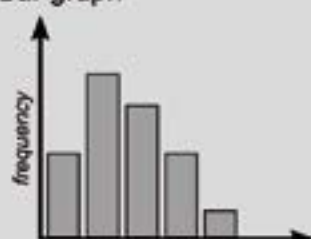
Perimeter is the 1-D length around a shape: m, cm
Area is the 2-D space inside a shape: m², cm²
Volume is the 3-D space inside a solid: m³, cm³
Capacity is the amount something can hold: l, ml
Remember to start with the same UNITS

Mathematics - data

BIDMAS

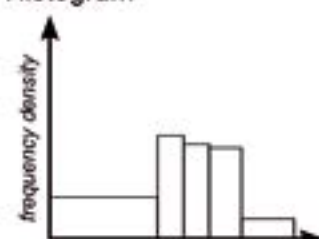
Brackets
Indices
Division
Multiplication
Addition
Subtraction

Bar graph



Used for discrete data.
Bars are all the same width.
Bar height represents frequency

Histogram



Used for continuous numerical data which has been classified into groups. Bars may be different widths. The area of the bar represents frequency.

Frequency polygon



May be used for both discrete & continuous data.
Points should be plotted in the middle of corresponding bars (bar chart or histogram).

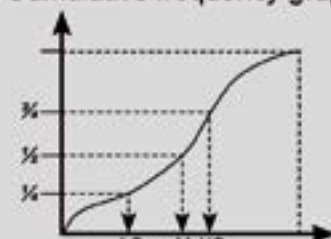
Pie chart (Pie graph)



Size of angle = $\frac{\text{frequency}}{\text{total frequency}} \times 360^\circ$

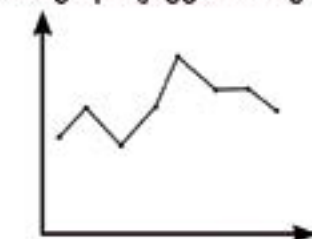
The angles should add up to 360°
Used to show proportions of an identifiable whole.

Cumulative frequency graph



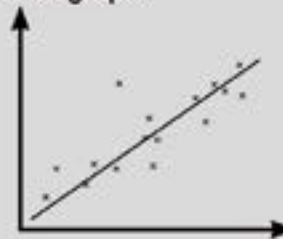
Useful for estimating median & quartiles for grouped data. Plot at the top end of the groups.

Line graph (jagged line graph)



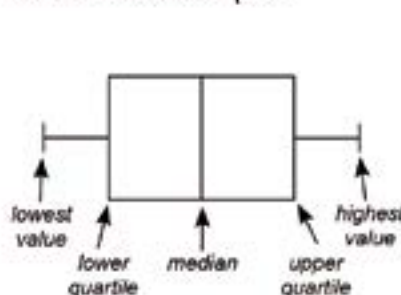
Used for continuous data. Shows relationship between two variables.

Scatter graph



Used to show correlation. Drawing a line of best fit allows estimation of values of one variable from values of the other variable.

Box and whisker plot



Clearly identifies the middle 50%.

Data

Discrete data

Discrete data is counted and can only take certain values.

Continuous data

Continuous data is measured and can take any value within range.

Averages

The **MEAN** of a set of data values is the sum of all the data values divided by the number of data values.

The **MODE** of a set of data value(s) that occur most often.

The **MEDIAN** of a set of data values is the middle value of the data set when it's been arranged in ascending order.

Mathematics - number

Grid method for multiplication

Split the numbers you are multiplying into units, tens, hundreds... and multiply each part separately. E.g. 243×17

x	200	40	3
10	2000	400	30
7	1400	280	21

Then add together all the products.

$2000 + 1400 + 400 + 280 + 30 + 21$

=4131

Directed numbers

Adding a negative number is the same as subtracting the positive.

Subtracting a negative is the same as adding the positive.

Types of number

Odd numbers: 1, 3, 5, 7, 9, 11 ...

Even numbers: 2, 4, 6, 8, 10 ...

Square numbers (formed by multiplying a number by itself): 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225

Cubed numbers (formed by multiplying a number by itself 3 times): 1, 8, 27, 64, 125, 216, 343, 512, 729, 1000

Multiples of a number are numbers that belong to its multiplication table.

E.g. the multiples of 4 are 4, 8, 12 ...

Factors of a number are numbers that divide exactly into a number. **FACTORS FIT!!!**

E.g. the factors of 20 are 1, 2, 4, 5, 10, 20.

Prime numbers are numbers that have TWO factors only. E.g. 2, 3, 5, 7, 11, 13, 17, 19 ...

Percentages/ decimals / fractions

50%	0.5	$\frac{1}{2}$
25%	0.25	$\frac{1}{4}$
75%	0.75	$\frac{3}{4}$
10%	0.1	$\frac{1}{10}$
20%	0.2	$\frac{2}{10} = \frac{1}{5}$
30%	0.3	$\frac{3}{10}$
60%	0.6	$\frac{6}{10} = \frac{3}{5}$
12.5%	0.125	$\frac{1}{8}$
33 1/3%	0.3	$\frac{1}{3}$

etc.

1	2	3	4	5	6	7	8	9	10	11	12
2	4	6	8	10	12	14	16	18	20	22	24
3	6	9	12	15	18	21	24	27	30	33	36
4	8	12	16	20	24	28	32	36	40	44	48
5	10	15	20	25	30	35	40	45	50	55	60
6	12	18	24	30	36	42	48	54	60	66	72
7	14	21	28	35	42	49	56	63	70	77	84
8	16	24	32	40	48	56	64	72	80	88	96
9	18	27	36	45	54	63	72	81	90	99	108
10	20	30	40	50	60	70	80	90	100	110	120
11	22	33	44	55	66	77	88	99	110	121	132
12	24	36	48	60	72	84	96	108	120	132	144

Multiplying and dividing negative numbers

When the signs are different (i.e. positive and negative) the answer is negative.

When the signs are the same (i.e. positive and positive or negative and negative) the answer is positive.

Prime factors

Prime factors of a number are its factors that are prime. Use a prime factor tree!

Circle the prime number and stop.

$= 2 \times 2 \times 2 \times 3$
 $= 2^4 \times 3$



Time

To find the difference between two times

1. Draw a time line
2. Count in minutes to the next hour
3. Count in hours until you can't count a whole hour
4. Count in minutes to the given time

E.g. How long is a journey starting at 11:30 and ending at 14:15?

11.30 >>>> 12.00 >>>> 14.00 >>>> 14.15
30mins 2hrs 15mins

= 2 hours and 45 minutes

Mathematics - algebra

<p>$3 + s$ means "3 plus s" or "s more than 3"</p> <p>$a - 5$ means "take 5 from a" or "5 less than a"</p> <p>$4b$ means "4 multiplied by b" or "4 lots of b"</p> <p>$k/2$ means "k divided by 2"</p> <p>v^2 means "v x v" or "v squared"</p> <p>Simplifying by collecting like terms</p> <p>e.g. $3a + 4b - 2a + b - 3c$</p> <p>Circle the first type of like terms. Collect them together.</p> <p>$= (3a) + 4b - (2a) + b - 3c$</p> <p>$= (3a - 2a) + 4b + b - 3c$</p> <p>Underline the next set of like terms. Collect them together.</p> <p>$= 3a - 2a + \underline{4b + b} - 3c$</p> <p>$= (a) + \underline{5b} - 3c$</p> <p>Continue and tidy up!</p> <p>$= a + 5b - 3c$</p>	<p>Indices (powers)</p> <p>p^2 means $p \times p$</p> <p>p^3 means $p \times p \times p$</p> <p>p^n means $p \times p \times \dots \times p$ (n times)</p> <p>$p^1 = p$</p> <p>$p^0 = 1$</p> <p>p^{-n} means $1/p^n$</p> <p>e.g. $3^{-2} = 1/3^2 = 1/9$</p> <p>$p^{1/n}$ mean $\sqrt[n]{p}$</p> <p>e.g. $27^{1/3} = \sqrt[3]{27} = 3$</p> <p>Remember - common mistake!</p> <p>$a^2 = a \times a$ and $2a = 2 \times a$</p> <p>so</p> <p>$a^2 + 2a$ cannot be simplified further as a^2 is not LIKE a !!!</p>	<p>Rules of indices</p> <p>$a^x \times a^y = a^{x+y}$</p> <p>$a^x \div a^y = a^{x-y}$</p> <p>$(a^x)^y = a^{xy}$</p> <p>Simplifying expressions</p> <p>DEAL WITH THE DIGITS AND THEN WITH THE INDICES!!!</p> <p>e.g. $6a^2b \times 3ab^3$</p> <p>$= 6 \times 3 \times a^2 \times a \times b \times b^3$</p> <p>$= 18 \times a^{(2+1)} \times b^{(1+3)}$</p> <p>e.g. $6a^2b \div 3ab^3$</p> <p>$= 6 \div 3 \times a^2 \div a \times b \div b^3$</p> <p>$= 2 \times a^{(2-1)} \times b^{(1-3)}$</p> <p>$= 2ab^{-2}$</p>
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Multiplying brackets grid method

<p>Multiplying brackets grid method</p> <p>$a(b+c)$</p> <table><tr><td>x</td><td>b</td><td>c</td></tr><tr><td>a</td><td>ab</td><td>ac</td></tr></table> <p>$= ab + ac$</p>	x	b	c	a	ab	ac	<p>Multiplying brackets grid method</p> <p>$a(b-c)$</p> <table><tr><td>x</td><td>b</td><td>-c</td></tr><tr><td>a</td><td>ab</td><td>-ac</td></tr></table> <p>$= ab - ac$</p>	x	b	-c	a	ab	-ac	<p>Multiplying double brackets</p> <p>$(a+b)(a+c)$</p> <table><tr><td>x</td><td>a</td><td>b</td></tr><tr><td>a</td><td>a^2</td><td>ab</td></tr><tr><td>c</td><td>ac</td><td>cb</td></tr></table> <p>$= a^2 + ab + ac + bc$</p>	x	a	b	a	a^2	ab	c	ac	cb	<p>An example of multiplying to get a quadratic equation</p> <p>$(a+2)(a-3)$</p> <table><tr><td>x</td><td>a</td><td>-3</td></tr><tr><td>a</td><td>a^2</td><td>-3a</td></tr><tr><td>2</td><td>2a</td><td>-6</td></tr></table> <p>$= a^2 - 3a + 2a - 6$ $= a^2 - a - 6$</p>	x	a	-3	a	a^2	-3a	2	2a	-6
x	b	c																															
a	ab	ac																															
x	b	-c																															
a	ab	-ac																															
x	a	b																															
a	a^2	ab																															
c	ac	cb																															
x	a	-3																															
a	a^2	-3a																															
2	2a	-6																															

Quadratic formula

For solving $ax^2+bx+c = 0$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Other useful websites

Useful web addresses

- ▶ www.mathsnet.net
- ▶ www.counton.org
- ▶ www.schoolzone.co.uk
- ▶ www.nrich.maths.org
- ▶ www.bbc.co.uk/bitesize/ks3/maths
- ▶ www.emaths.co.uk
- ▶ www.mathsisfun.com

Maths Logins

Mathswatch

<https://vle.mathswatch.co.uk/vle>

Username: @littleilford

Password: Littleilford1

Pinpoint Learning (Year 11 only)

Username: unique

Password: PPL

Notes/Calculations:

Chemistry Data Sheet

1. Reactivity Series of Metals

Potassium
Sodium
Calcium
Magnesium
Aluminium
Carbon
Zinc
Iron
Tin
Lead
Hydrogen
Copper
Silver
Gold
Platinum

most reactive



least reactive

(elements in italics, though non-metals, have been included for comparison)

2. Formulae of Some Common Ions

Positive ions

Name	Formula
Hydrogen	H ⁺
Sodium	Na ⁺
Silver	Ag ⁺
Potassium	K ⁺
Lithium	Li ⁺
Ammonium	NH ₄ ⁺
Barium	Ba ²⁺
Calcium	Ca ²⁺
Copper(II)	Cu ²⁺
Magnesium	Mg ²⁺
Zinc	Zn ²⁺
Lead	Pb ²⁺
Iron(II)	Fe ²⁺
Iron(III)	Fe ³⁺
Aluminium	Al ³⁺

Negative ions

Name	Formula
Chloride	Cl ⁻
Bromide	Br ⁻
Fluoride	F ⁻
Iodide	I ⁻
Hydroxide	OH ⁻
Nitrate	NO ₃ ⁻
Oxide	O ²⁻
Sulfide	S ²⁻
Sulfate	SO ₄ ²⁻
Carbonate	CO ₃ ²⁻

Turn over ►

Periodic Table

The Periodic Table lists all the elements that have been discovered.
Learn to use it by finding patterns and trends in the characteristics of different elements.

GROUP

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	6																																																											

Physics Equations Sheet

GCSE Physics (8463)

1	pressure due to a column of liquid = height of column \times density of liquid \times gravitational field strength (g)	$p = h \rho g$
2	$(\text{final velocity})^2 - (\text{initial velocity})^2 = 2 \times \text{acceleration} \times \text{distance}$	$v^2 - u^2 = 2 a s$
3	$\text{force} = \frac{\text{change in momentum}}{\text{time taken}}$	$F = \frac{m \Delta v}{\Delta t}$
4	elastic potential energy = $0.5 \times \text{spring constant} \times (\text{extension})^2$	$E_e = \frac{1}{2} k e^2$
5	change in thermal energy = mass \times specific heat capacity \times temperature change	$\Delta E = m c \Delta \theta$
6	$\text{period} = \frac{1}{\text{frequency}}$	$T = \frac{1}{f}$
7	$\text{magnification} = \frac{\text{image height}}{\text{object height}}$	
8	force on a conductor (at right angles to a magnetic field) carrying a current = magnetic flux density \times current \times length	$F = B I l$
9	thermal energy for a change of state = mass \times specific latent heat	$E = m L$
10	$\frac{\text{potential difference across primary coil}}{\text{potential difference across secondary coil}} = \frac{\text{number of turns in primary coil}}{\text{number of turns in secondary coil}}$	$\frac{V_p}{V_s} = \frac{n_p}{n_s}$
11	potential difference across primary coil \times current in primary coil = potential difference across secondary coil \times current in secondary coil	$V_p I_p = V_s I_s$
12	For gases: pressure \times volume = constant	$p V = \text{constant}$

Higher Tier only equations are in **bold**.

Physics Equations Sheet

GCSE Combined Science: Trilogy (8464)

GCSE Combined Science: Synergy (8465)

1	$(\text{final velocity})^2 - (\text{initial velocity})^2 = 2 \times \text{acceleration} \times \text{distance}$	$v^2 - u^2 = 2 a s$
2	elastic potential energy = $0.5 \times \text{spring constant} \times (\text{extension})^2$	$E_e = \frac{1}{2} k e^2$
3	change in thermal energy = mass \times specific heat capacity \times temperature change	$\Delta E = m c \Delta \theta$
4	$\text{period} = \frac{1}{\text{frequency}}$	$T = \frac{1}{f}$
5	force on a conductor (at right angles to a magnetic field) carrying a current = magnetic flux density \times current \times length	$F = B I l$
6	thermal energy for a change of state = mass \times specific latent heat	$E = m L$
7	potential difference across primary coil \times current in primary coil = potential difference across secondary coil \times current in secondary coil	$V_p I_p = V_s I_s$

Higher Tier only equations are in **bold**.

Science

Subject specific vocabulary

Accuracy

A measurement result is considered accurate if it is judged to be close to the true value.

Calibration

Marking a scale on a measuring instrument. This involves establishing the relationship between indications of a measuring instrument and standard or reference quantity values, which must be applied. For example, placing a thermometer in melting ice to see whether it reads zero, in order to check if it has been calibrated correctly.

Data

Information, either qualitative or quantitative, that has been collected.

Error

See also uncertainty.

Measurement error

The difference between a measured value and the true value.

Anomalies

These are values in a set of results which are judged not to be part of the variation caused by random uncertainty.

Random error

These cause readings to be spread about the true value, due to results varying in an unpredictable way from one measurement to the next. Random errors are present when any measurement is made, and cannot be corrected. The effect of random errors can be reduced by making more measurements and calculating a new mean.

Systematic error

These cause readings to differ from the true value by a consistent amount each time a measurement is made. Sources of systematic error can include the environment, methods of observation or instruments used. Systematic errors cannot be dealt with by simple repeats. If a systematic error is suspected, the data collection should be repeated using a different technique or a different set of equipment, and the results compared.

Zero error

Any indication that a measuring system gives a false reading when the true value of a measured quantity is zero, eg the needle on an ammeter failing to return to zero when no current flows. A zero error may result in a systematic uncertainty.

Evidence

Data which has been shown to be valid.

Fair test

A fair test is one in which only the independent variable has been allowed to affect the dependent variable.

Hypothesis

A proposal intended to explain certain facts or observations.

Interval

The quantity between readings, eg a set of 11 readings equally spaced over a distance of 1 metre would give an interval of 10 centimetres.

Precision

Precise measurements are ones in which there is very little spread about the mean value. Precision depends only on the extent of random errors - it gives no indication of how close results are to the true value.

Prediction

A prediction is a statement suggesting what will happen in the future, based on observation, experience or a hypothesis.

Range

The maximum and minimum values of the independent or dependent variables ; important in ensuring that any pattern is detected. For example a range of distances may be quoted as either: 'From 10 cm to 50 cm' or 'From 50 cm to 10 cm'.

Repeatable

A measurement is repeatable if the original experimenter repeats the investigation using same method and equipment and obtains the same results. Previously known as reliable.

Reproducible

A measurement is reproducible if the investigation is repeated by another person, or by using different equipment or techniques, and the same results are obtained. Previously known as reliable.

Resolution

This is the smallest change in the quantity being measured (input) of a measuring instrument that gives a perceptible change in the reading.

Sketch graph

A line graph, not necessarily on a grid, that shows the general shape of the relationship between two variables. It will not have any points plotted and although the axes should be labelled they may not be scaled.

True value

This is the value that would be obtained in an ideal measurement.

Uncertainty

The interval within which the true value can be expected to lie. Whenever a measurement is made, there will always be some uncertainty or doubt about the result obtained. Uncertainty can be expressed in terms of spread of values obtained. For example, a length of 56 cm \pm 2 cm would mean the true value could be anywhere between 54 cm and 58 cm.

Validity

Suitability of the investigative procedure to answer the question being asked. For example, an investigation to find out if the rate of a chemical reaction depended upon the concentration of one of the reactants would not be a valid procedure if the temperature of the reactants was not controlled.

Valid conclusion

A conclusion supported by valid data, obtained from an appropriate experimental design and based on sound reasoning.

Variables

These are physical, chemical or biological quantities or characteristics.

Categoric

Categoric variables have values that are labels, eg names of plants or types of material.

Continuous

Continuous variables can have values (called a quantity) that can be given a magnitude either by counting (as in the case of the number of shrimp) or by measurement (eg light intensity, flow rate etc). Previously known as discrete variable.

Control

Control variable is one which may, in addition to the independent variable, affect the outcome of the investigation and therefore has to be kept constant or at least monitored.

Dependent

Dependent variable is the variable of which the value is measured for each and every change in the independent variable.

Independent

Independent variable is the variable for which values are changed or selected by the investigator.



By KATIE ROSS

Command words in GCSE Biology

State, describe, explain, compare, evaluate and **suggest** are the most important command words. Learn to recognise the command words when they come up in exam questions, follow our advice on how to answer them and you'll pick up precious marks in your Biology GCSE.

It's very important to recognise command words in the exam and then to **tailor your answers** to the instructions given to you by these command words.

State

Take, for example, the picture of the girl. You could state that this is a girl.

Describe

Then to describe the girl you could say that she has brown hair and brown eyes. Simply say what you see. Sometimes you may need to describe a process or pathway. For example when you inhale, oxygen travels down the trachea, then into the bronchi and the bronchioles and finally into the alveoli before diffusing into the blood. In this situation, a describe question is testing your knowledge and testing your factual recall.

It can sometimes be difficult to distinguish between describing a biological structure and describing the function of that structure. The structure is something that you can label on a diagram, like a nucleus in a diagram of a cell. The function is the job or role of that structure (the nucleus contains the DNA that codes for the proteins that control the cell).

Finally, when describing graphs, you need to take a slightly different approach. This is covered in our blog:

Describing, explaining and comparing graphs.

Explain

When asked to explain, you need to give a scientific reason *why* or *how*. Here, you need to use the word 'because'. The girl has brown hair and brown eyes *because* she has inherited the alleles/genes for these characteristics from her parents. If the exam question is worth several marks you may need to support your answer with a genetic diagram or a Punnett square to really show off your amazing understanding of inheritance!

Application questions ask you to explain *why* or *how* something happens but in an *unfamiliar context*. You may have learnt how farmers have selectively bred cows to yield large volumes of milk. But an exam question may ask you to explain how a farmer can selectively breed tomatoes to produce large tasty tomatoes. Here you simply show off your understanding of the process of selective breeding but change 'cow' to 'plant' and 'milk yield' to 'size and taste'. We discuss application questions in detail in our blog: **The application of knowledge to unfamiliar contexts.**

Compare

When asked to compare, you need to comment on both the similarities and the differences. It's important to take each similarity and difference in turn as the mark schemes often offer only 1 mark per comparison, rather than a mark for each individual set of similarities and differences. It's important to use comparative terms such as longer, fewer, faster or to say that one has something while the other lacks something.

For example, if asked to compare mitosis and meiosis, you could write the following: "Mitosis and meiosis are similar because they are both forms of cell division that produce daughter cells. However, there are clear differences. Mitosis produces two identical daughter cells, while meiosis produces four unique daughter cells. Mitosis involves one division, while meiosis involves two".

If asked to compare aerobic and anaerobic respiration you could say: "They both transfer energy from glucose. But aerobic respiration releases more ATP molecules than anaerobic respiration and aerobic respiration releases carbon dioxide and water while anaerobic releases lactic acid as a product".

Common compare questions in Biology are: *sexual/asexual reproduction; the role of the menstrual cycle hormones; plant/animal cells; eukaryotic/prokaryotic cells; light/electron microscopes; osmosis/diffusion/active transport; biotic/abiotic factors; communicable / non-communicable diseases; arteries/veins/capillaries; translocation/transpiration; xylem/phloem*. These are all worth practising.

Evaluate

In the exam, if you are asked to evaluate, you have to put forward advantages and disadvantages. A good way to revise these questions is to create a table of 'pros' and 'cons' and use this to evaluate the common topics that come up in the exams.

Common evaluate questions in Biology are: *Different forms of contraceptives; IVF; genetic engineering; intensive farming; light or electron microscopes; stem cells; treatments for cardiovascular disease*. Once again, get practising!

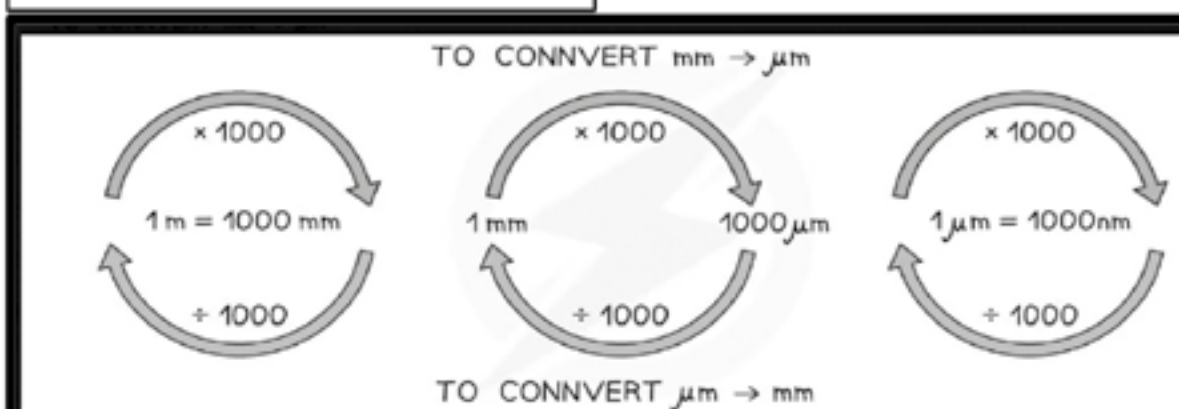
Suggest

Finally, in suggest questions, which are often worth only 1 mark, you would not necessarily have been taught the answer and you need to make an *educated guess*. Here, the examiner is trying to work out how good you are at applying what you have learnt to novel or unfamiliar contexts.



Maths skills for GCSE science

Converting units



Rounding & Estimation

How do I round numbers to a given place value?

- Identify the **digit** in the **required place value** and **circle the number to the right**
 - This number will determine whether to round up or round off
 - e.g. To round 1294 to the nearest 100 you would find the 2 digit and then use the 9 to decide how to round 12**9**4
- Identify the **two options** that the number could round to
 - e.g. the two nearest 100's to 1294 are 1200 and 1300
 - Be careful if your digit is a 9 and the next number up will affect the higher place values
 - e.g. the nearest 2 decimal places to 3.4**9**7 are 3.49 and 3.50
- If the circled number is **5 or more** then you round to the **bigger number**
- If the circled number is **less than 5** then you round to the **smaller number**
- You then put a **zero in any following place values before the decimal**
 - If you are rounding to nearest decimal places then make sure you leave your answer with the **required amount of decimal places** - do not put unnecessary zeros
 - e.g. 1297 to the nearest 100 is 1300
 - e.g. 3.497 to two decimal places (nearest 100th) is 3.50 (exactly two decimal places in answer)

How do I round to significant figures?

- Rounding to significant figures is the same as rounding to place value
 - You just need to identify the relevant place value
- Find the first significant figure
 - Find the **biggest place value** that has a **non-zero digit**
 - The first significant figure of 3097 is 3
 - The first significant figure of 0.006207 is 6
- Start with this number and **count along to the right**
 - You do count the following zeros
 - e.g. 0 is the **second** significant figure of 3**0**97
 - e.g. 9 is the **third** significant figure of 30**9**7
- Use the **normal rules for rounding**
 - Circle the number to the right
 - Use this to determine whether the given significant figure rounds up or rounds off