LITTLE ILFORD SCHOOL

COURAGE • COMMITMENT • COMPASSION

STUDENT PLANNER

2026 / 27

Name: .....

Form: .....

Form Room: .....

Form Tutor: .....

PAL: .....

DPAL: .....

Jack Petchey Foundation

Inspire • Motivate • Achieve

SUBJECT INFORMATION

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Map of United Kingdom



Map of Europe



Map of Europe



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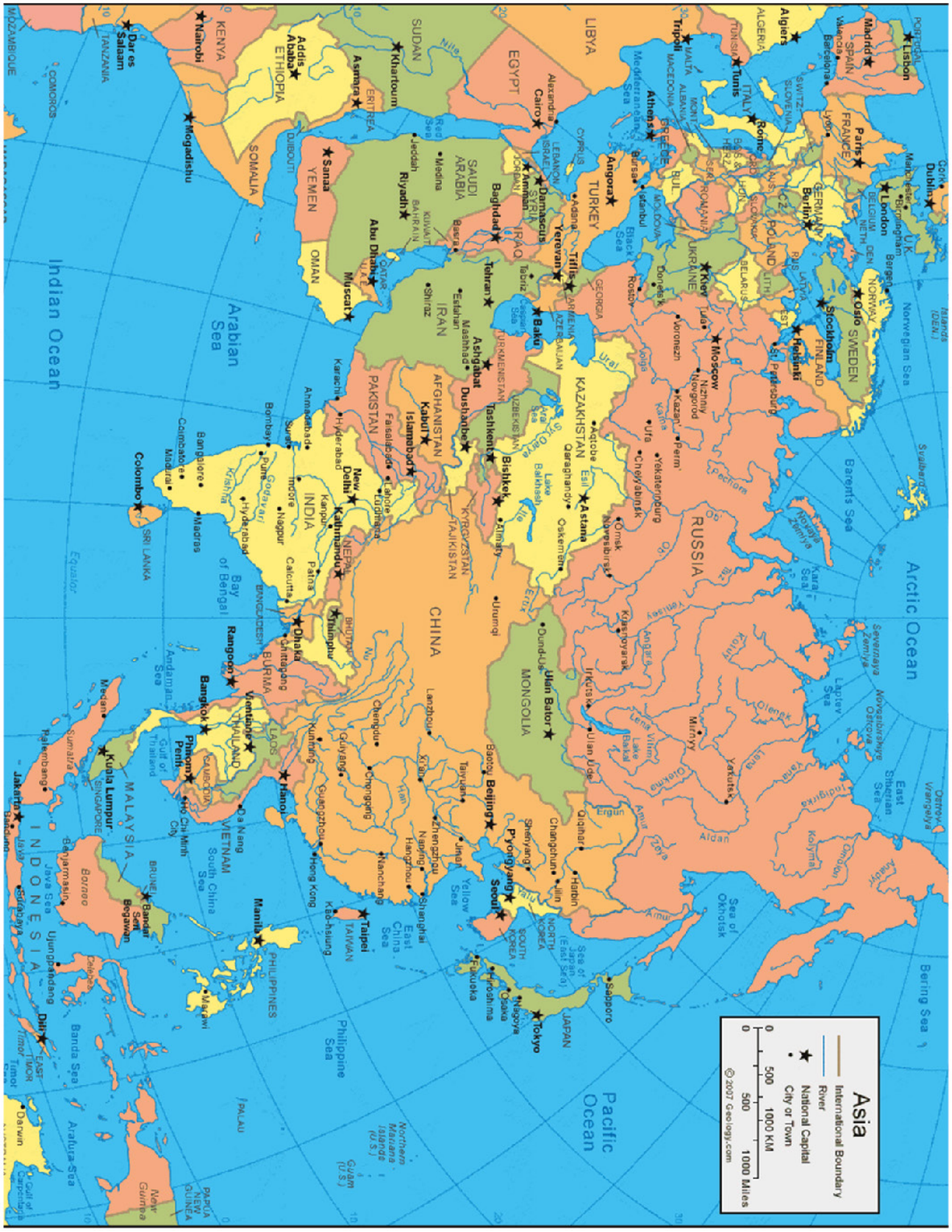
World Map


ARCTIC
GREENLAND
(Den.)
ICELAND
ALASKA
(USA)
Arctic Circle
CANADA
North
America
Vancouver
Ottawa
Chicago
Detroit
Boston
San Francisco
UNITED STATES
New York
Washington, D. C.
Los Angeles
Memphis
Dallas
Atlanta
Houston
Bermuda (UK)
NORTH
ATLANTIC
OCEAN
Europe
UNITED KINGDOM
IRELAND
PORTUGAL
MOROCCO
Canary Islands (Spain)
WESTERN SAHARA
MAURITANIA
SENEGAL
GAMBIA
GUINEA BISSAU
GUINEA
SIERRA LEONE
LIBERIA
Tropic of Cancer
Hawaii
(USA)
MEXICO
Mexico City
THE BAHAMAS
CUBA
JAMAICA
HAITI
DOM. REP.
Puerto Rico (USA)
BELIZE
GUATEMALA
HONDURAS
EL SALVADOR
NICARAGUA
COSTA RICA
PANAMA
ST KITTS & NEVIS
ANTIGUA & BARBUDA
DOMINICA
ST LUCIA
BARBADOS
ST VINCENT
TRINIDAD & TOBAGO
Caracas
VENEZUELA
GUYANA
SURINAME
FRENCH GUIANA
Bogota
COLOMBIA
ECUADOR
Galapagos Is.
(Ecuador)
PACIFIC
OCEAN
South
America
PERU
Lima
BRAZIL
Brasilia
BOLIVIA
PARAGUAY
Rio De Janeiro
São Paulo
SOUTH
ATLANTIC
OCEAN
FRENCH POLYNESIA
(France)
Tropic of Capricorn
Easter Island
(Chile)
CHILE
ARGENTINA
Santiago
URUGUAY
Buenos Aires
FALKLAND
ISLANDS
(UK)
SOUTH GEORGIA
ISLAND
(UK)
Antarctic Circle
165°W
150°W
135°W
120°W
105°W
90°W
75°W
60°W
45°W
30°W
15°W
75°N
60°N
45°N
30°N
15°N
0°
15°S
30°S
45°S
60°S
75°S

World Map


OCEAN
RUSSIA
Arctic Circle
FINLAND
Moscow
KAZAKHSTAN
MONGOLIA
CHINA
Asia
Beijing
NORTH KOREA
Seoul
SOUTH KOREA
Tokyo
JAPAN
Shanghai
PACIFIC
OCEAN
Tropic of Cancer
Africa
INDIA
Mumbai (Bombay)
New Delhi
Hong Kong
TAIWAN
Manila
PHILIPPINES
Bangkok
THAILAND
CAMBODIA
Hanoi
Colombo
SRI LANKA
Kuala Lumpur
MALAYSIA
SINGAPORE
BRUNEI
INDONESIA
Jakarta
PAPUA NEW GUINEA
EAST TIMOR
MALDIVES
SEYCHELLES
INDIAN
OCEAN
Oceania
AUSTRALIA
Perth
Sydney
Canberra
NEW ZEALAND
Wellington
FIJI
Tropic of Capricorn
SOUTHERN OCEAN
Antarctica
Antarctic Circle
Cairo
Baghdad
Tehran
Kabul
Islamabad
Pretoria
Cape Town
Kinshasa
Nairobi
Abuja
Khartoum
Tripoli
Algiers
Tunis
Rabat
Dakar
Bamako
Niamey
N'Djamena
Addis Ababa
Mogadishu
Kampala
Lusaka
Harare
Windhoek
Gaborone
Maputo
Antananarivo
Port Louis

Asia Map


Asia
International Boundary
River
National Capital
City or Town
0 500 1000 KM
0 500 1000 Miles
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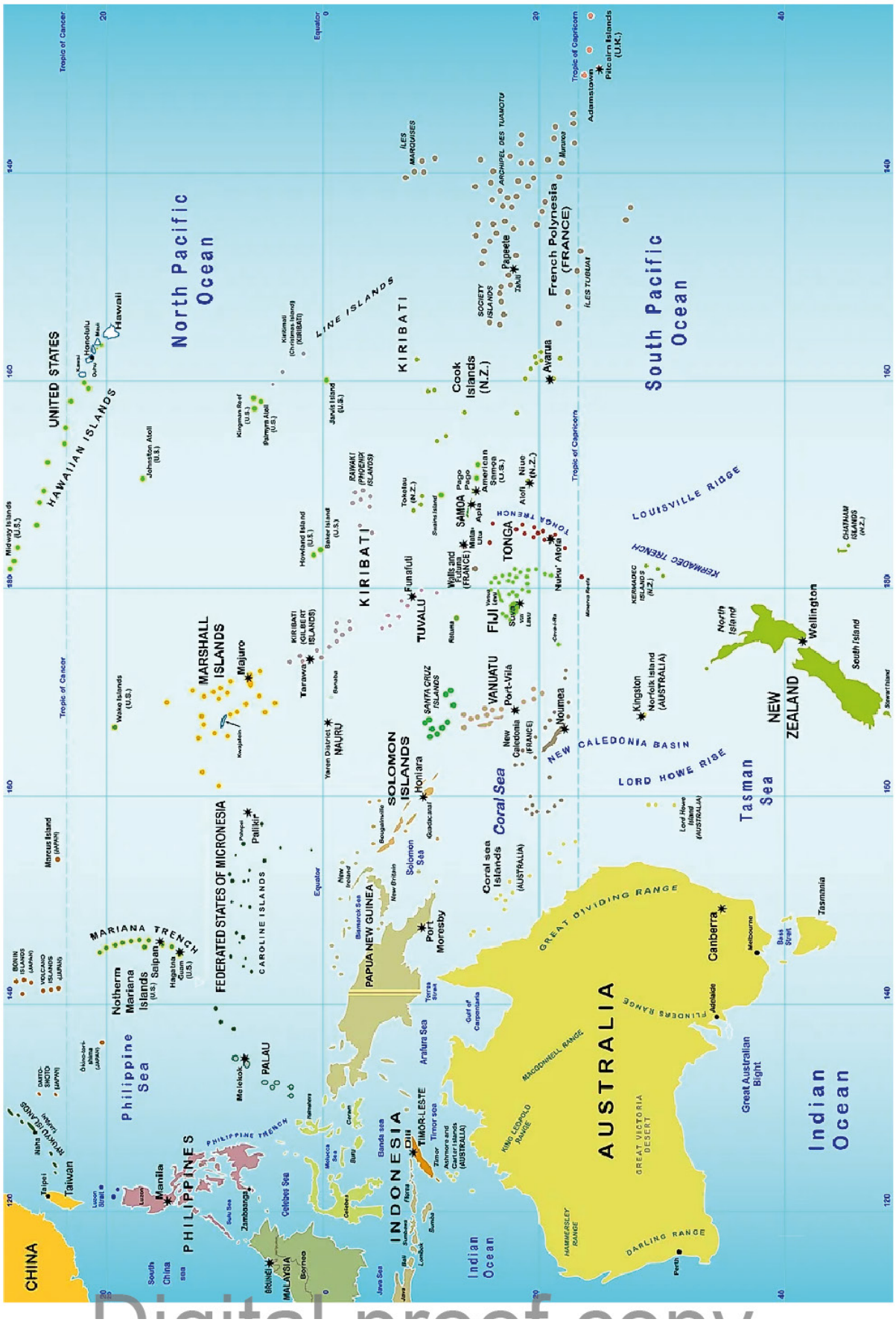
Arctic Ocean
Pacific Ocean
Indian Ocean
Bering Sea
Barents Sea
Norwegian Sea
Arabian Sea
Bay of Bengal
Philippine Sea
South China Sea
East China Sea
Yellow Sea
Sea of Okhotsk
Sea of Japan (East Sea)
Andaman Sea
Banda Sea
Arafura Sea
Timor Sea
Java Sea
Celebes Sea
Gulf of Thailand
Gulf of Carpentaria
Equator
RUSSIA
CHINA
INDIA
KAZAKHSTAN
MONGOLIA
IRAN
IRAQ
SAUDI ARABIA
EGYPT
LIBYA
TURKEY
SUDAN
ETHIOPIA
KENYA
SOMALIA
YEMEN
OMAN
PAKISTAN
AFGHANISTAN
TURKMENISTAN
UZBEKISTAN
KYRGYZSTAN
TAJIKISTAN
BELARUS
UKRAINE
POLAND
GERMANY
FRANCE
SPAIN
PORTUGAL
ITALY
GREECE
SWEDEN
NORWAY
FINLAND
JAPAN
MALAYSIA
INDONESIA
THAILAND
VIETNAM
PHILIPPINES
BURMA
SRI LANKA
NEPAL
BHUTAN
BANGLADESH
TAIWAN
NORTH KOREA
SOUTH KOREA
Moscow
Beijing
Tokyo
Seoul
Pyongyang
Ulan Bator
Astana
Tashkent
Kabul
Islamabad
New Delhi
Kathmandu
Dhaka
Rangoon
Bangkok
Hanoi
Kuala Lumpur
Jakarta
Manila
Taipei
Hong Kong
Singapore
Baghdad
Tehran
Riyadh
Cairo
Athens
Istanbul
Ankara
Damascus
Jerusalem
Amman
Tripoli
Algiers
Tunis
Rome
Madrid
Lisbon
Paris
London
Berlin
Warsaw
Kiev
Minsk
Oslo
Stockholm
Helsinki
St. Petersburg
Nairobi
Addis Ababa
Khartoum
Mogadishu
Dar es Salaam
Colombo
Karachi
Lahore
Mumbai
Chennai
Kolkata
Hyderabad
Bangalore
Ho Chi Minh City
Phnom Penh
Vientiane
Da Nang
Medan
Palembang
Surabaya
Bandar Seri Begawan
Darwin
Perth
Sapporo
Osaka
Nagoya
Hiroshima
Fukuoka
Qingdao
Shanghai
Tianjin
Harbin
Changchun
Shenyang
Urumqi
Lanzhou
Chengdu
Chongqing
Kunming
Guangzhou
Guiyang
Nanchang
Hangzhou
Nanjing
Zhengzhou
Taiyuan
Lhasa
Yekaterinburg
Chelyabinsk
Perm'
Ufa
Kazan'
Nizhniy Novgorod
Volgograd
Samara
Saratov
Rostov
Donetsk
Kharkiv
Minsk
Vilnius
Riga
Tallinn
Murmansk
Arkhangelsk
Novosibirsk
Omsk
Krasnoyarsk
Irkutsk
Yakutsk
Khabarovsk
Vladivostok
Magadan
Anadyr'
Petropavlovsk-Kamchatskiy
Ob
Lena
Yenisey
Amur
Kolyma
Aldan
Ural
Volga
Caspian Sea
Aral Sea
Lake Baikal
Lake Balkhash
Black Sea
Mediterranean Sea
Red Sea
Nile
Euphrates
Tigris
Indus
Ganges
Brahmaputra
Irrawaddy
Mekong
Yangtze
Yellow River
Pearl River
Hong
Taiwan
Luzon
Mindanao
Sumatra
Java
Borneo
Sulawesi
New Guinea
Timor
Northern Mariana Islands (U.S.)
Guam (U.S.)
Palau
Papua New Guinea
East Timor

Oceania Map



Digital proof copy

North America Map



South America Map



Digital proof copy

Africa Map


AFRICA
National capital
Major City
International boundary
© Nations Online Project
Mediterranean Sea
Tropic of Cancer
Tropic of Capricorn
Equator
Red Sea
Gulf of Guinea
Gulf of Aden
Indian Ocean
SOUTH ATLANTIC OCEAN
Mozambique Channel
Algiers
Tunis
Tripoli
Benghazi
Cairo
Alexandria
Port Said
Suez
Luxor
Aswan
Rabat
Casablanca
Marrakech
Oran
Laayoune (El Aaiún)
Western Sahara
Nouakchott
Timbuktu
Dakar
Banjul
Bissau
Conakry
Freetown
Monrovia
Bamako
Niamey
Ouagadougou
Abidjan
Yamoussoukro
Accra
Lome
Porto-Novo
Kano
Ibadan
Lagos
Abuja
N'Djamena
Malabo
Douala
Yaoundé
Bangui
Libreville
São Tome
Brazzaville
Kinshasa
Luanda
Port Sudan
Omdurman
Khartoum
Asmara
Djibouti
Addis Ababa
Juba
Kisangani
Kampala
Kigali
Bujumbura
Nairobi
Mombasa
Dodoma
Dar es Salaam
Mogadishu
Lubumbashi
Lusaka
Harare
Beira
Lilongwe
Moroni
Antananarivo
Namibe
Windhoek
Walvis Bay
Gaborone
Pretoria
Johannesburg
Mbabane
Maputo
Bloemfontein
Maseru
Durban
Cape Town
Port Elizabeth
St. Helena
Ascension (St. Helena)
MOROCCO
ALGERIA
LIBYA
EGYPT
MAURITANIA
MALI
NIGER
CHAD
SUDAN
SENEGAL
THE GAMBIA
GUINEA-BISSAU
GUINEA
BURKINA FASO
BENIN
TOGO
GHANA
CÔTE D'IVOIRE
SIERRA LEONE
LIBERIA
NIGERIA
CAMEROON
EQUATORIAL GUINEA
SAO TOME AND PRINCIPE
GABON
CENTRAL AFRICAN REPUBLIC
SOUTH SUDAN
ETHIOPIA
ERITREA
DJIBOUTI
SOMALIA
UGANDA
KENYA
RWANDA
BURUNDI
REP. OF THE CONGO
DEMOCRATIC REPUBLIC OF THE CONGO
TANZANIA
ANGOLA
ZAMBIA
MALAWI
ZIMBABWE
MOZAMBIQUE
NAMIBIA
BOTSWANA
ESWATINI
LESOTHO
SOUTH AFRICA
SEYCHELLES
COMOROS
Mayotte
MADAGASCAR
MADEIRA ISLANDS (Portugal)
CANARY ISLANDS (Spain)
Ceuta (SP.)
Melilla (SP.)
Annobon (EQUA. GUL)
Lake Victoria
Lake Tanganyika
Lake Nyasa
N
0 400 800 1200 km
0 400 800 mi

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 plait	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 ... du papier ... un (nouveau) cahier / mon cahier ... les /mes devoirs ... de la colle ... d'aide	... a/my pen ... some paper ... a new book / my book ... the / my homework ... glue ... 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 ... ... aller aux toilettes ? ... enlever mon pull ? ... parler en anglais ? ... me lever ? ... changer de place ? ... l'expliquer à ... ? ... aider ... ?	Can I ... ... go to the toilet ? ... take off my jumper? ... speak in English ? ... get up ? ... change seats ? ... explain it to ...? ... 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 ... ... le bus était en retard ... je me suis levé trop tard ... je n'ai pas entendu mon réveil ... je parlais à Monsieur / Madame ...	I am late because ... ... the bus was late ... I got up too late ... I did not hear my alarm ... I was talking to Mr / Ms ...
lisez ! copiez ! écrivez ! écoutez ! collez ! levez-vous ! asseyez-vous ! levez la main ! sortez vos affaires ! rangez vos affaires !	read ! copy ! write ! listen ! stick ! get up ! sit down ! raise your hand ! get your things out ! 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	25 vingt-cinq	73 soixante treize	83 quatre-vingt-trois
5 cinq	15 quinze	26 vingt-six	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 …	Il/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

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

Time Markers

For verbs in the present

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 past tense

El fin de semana pasado
El sábado pasado
Ayer

For verbs in the future tense

El próximo fin de semana
El sábado que viene
Mañana

Frequency Words

For verbs in any tense (except normalement which is present tense)

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 past

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 the present or future tense

si llueve (if it trains)
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)

Link words

y (and)
entonces (then)
después de eso (after that)
luego (then)
más tarde (later)
también (also)
pero (but)
sin embargo (however)
aunque (although)

Opinions

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/ vídeos 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:				Going to future
	BAILAR	COMER	ESCRIBIR	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

Le weekend (at the we ekend)
Le shamedmatin (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

Le weekend dernier
Samedi dernier
La semaine dernière
hier

For verbs in the past tense

Le weekend prochain
le samedi prochain
la semaine prochaine
demain(tomorrow)

For verbs in the future

Frequency Words

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 normalement which is present tense)

parce qu'il pleuvait
parce qu'il faisait beau
parce qu'il faisait mauvais

For verbs in past tense

s'il pleut
s'il fait beau
s'il fait mauvais
peut-être (maybe)
si possible (if poss ible)
si j'ai le droit (if I'm allowed)

For verbs in the present or future tense

Link words

et (and)
puis (then)
après cela (after that)
ensuite (then)
plus tard (later)
aussi (also)
mais (but)
par contre (however)
bien que (although)

Opinions

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 , inté ressant, 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 vidéos
jouer	– to play / playing	au basket / au foot / au tennis / aux jeux vidéos / 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 copainssur 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 E.g. choisir – to choose
3. Verbs ending in–re E.g. entendre – to hear

Infinitive	present	past	future simple (will)	future proc he (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 / je suis ……-é(e) tu as …-é / tu es … -é(e) il/elle a …-é / il/elle est … -é(e) nous avons …-é / nous sommes …-é(e)s vous avez …-é / vous êtes …-é(e)s ils ont …-é / ils sont …-é(e)s	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 unfinitive 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 / je suis ……-i(e) tu as …-i / tu es … -i(e) il/elle a …-i / il/elle est … -i(e) nous avons …-i / nous sommes …-i(e)s vous avez …-i / vous êtes …-i(e)s ils ont …-i / ils sont …-i(e)s	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 unfinitive 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 … -iraien t
-re e.g. vendre	1) take away –re ending 2) add je ……-s tu ……-s il/elle …- nous ……-ons vous ……-ez ils/elles …-ent	1) take away –re ending 2) add j'ai …-u / je suis ……-u(e) tu as …-u / tu es … -u(e) il/elle a …-u / il/elle est … -u(e) nous avons …-u / nous sommes …-u(e)s vous avez …-u / vous êtes …-u(e)s ils ont …-u / ils sont …-u(e)s	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 unfinitive 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 il/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

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 veux 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 voudrons 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 pourrons 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

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 … du papel … un / mi cuaderno (nuevo) … los / mis deberes … pegamento … ayuda	… a/my pen … some paper … a new book / my book … the / my homework … glue … 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 … … ir al servicio? … quitar mi suéter / jersey? … hablar en inglés? … levantarme? … cambiar de sitio? … explicárselo a …? … ayudar a …?	Can I … … go to the toilet? … take off my jumper? … speak in English? … get up? … change seats? … explain it to …? … 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 … … el autobús llegó con retraso. … me levantado tarde. … no he escuchado el despertador. … estaba hablando con el señor / la señorita …	I am late because … … the bus was late … I got up too late … I did not hear my alarm … I was talking to Mr / Ms …
Lee Copia Escribe Escucha Pega Levántese Siéntate Levanta la mano Sacad las cosas Recoged las cosas	read! copy! write! listen! stick! get up! sit down! raise your hand! get your things out! pack up!

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 nueva	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 / ella – 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

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.

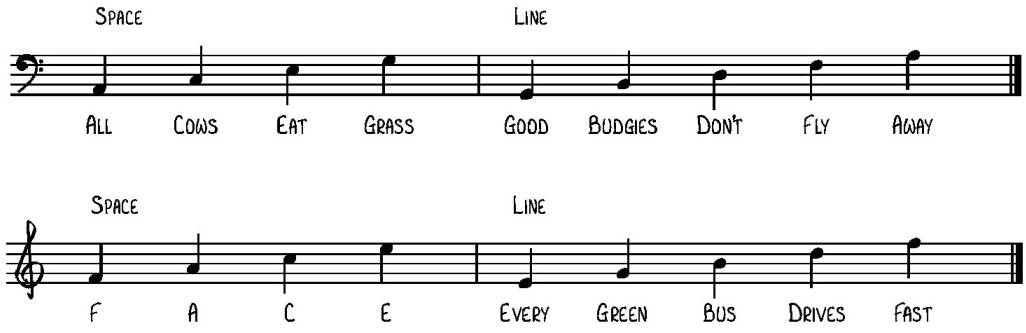
M **Melody –** The effect created by combining a variety of notes of different pitches. Consider the movement e.g steps, skips, leaps.
Metre – The number of beats in a bar e.g 3/4, 6/8 consider regular and irregular time signatures e.g. 4/4, 5/4.

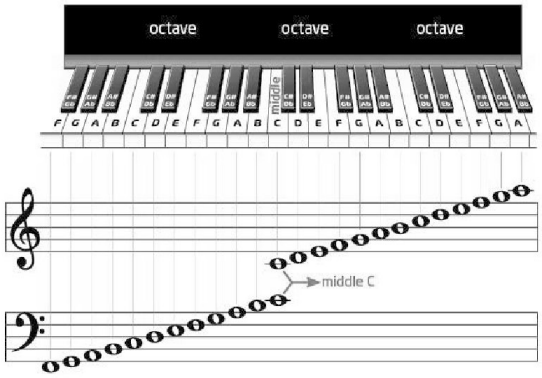
I **Instrumentation –** The combination of instruments that are used, consider articulation and timbre e.g staccato, legato, pizzicato.

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.

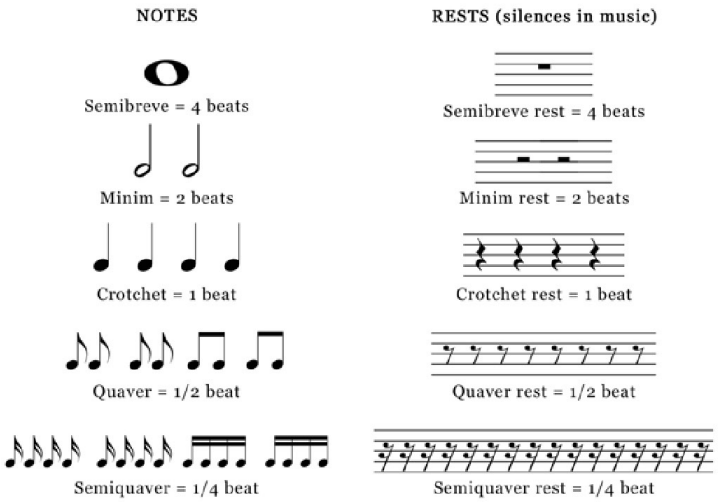
H **Harmony –** How notes are combined to build up chords. Consider concords and discords.

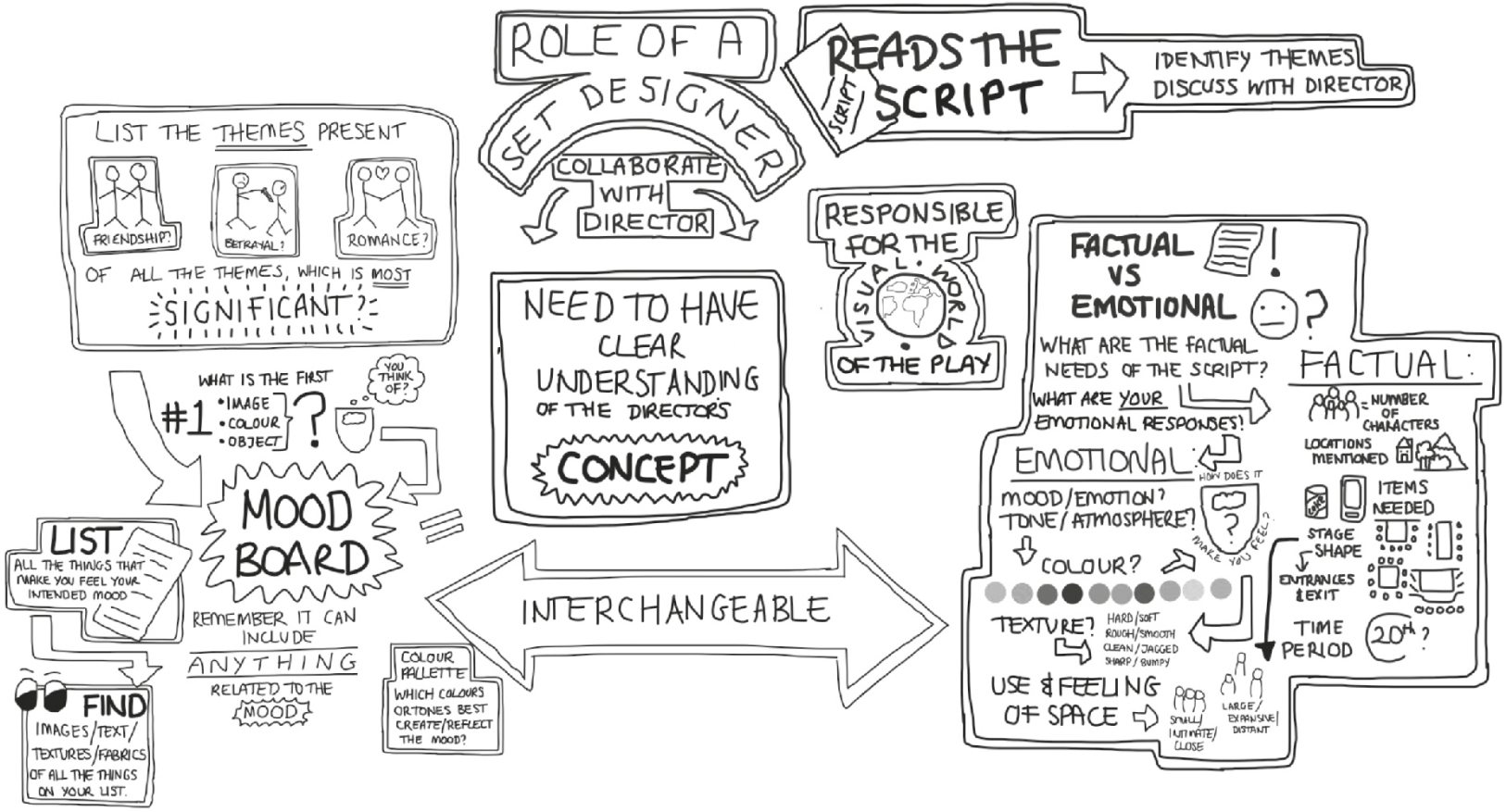
American / German note names	British note names	Note symbols	Note value
Whole note	**Semibreve**		4 beats
Half note	**Minim**		2 beats
Quarter note	**Crotchet**		1 beat
Eighth note	**Quaver**		1/2 of a beat
Sixteenth note	**Semiquaver**		1/4 of a beat





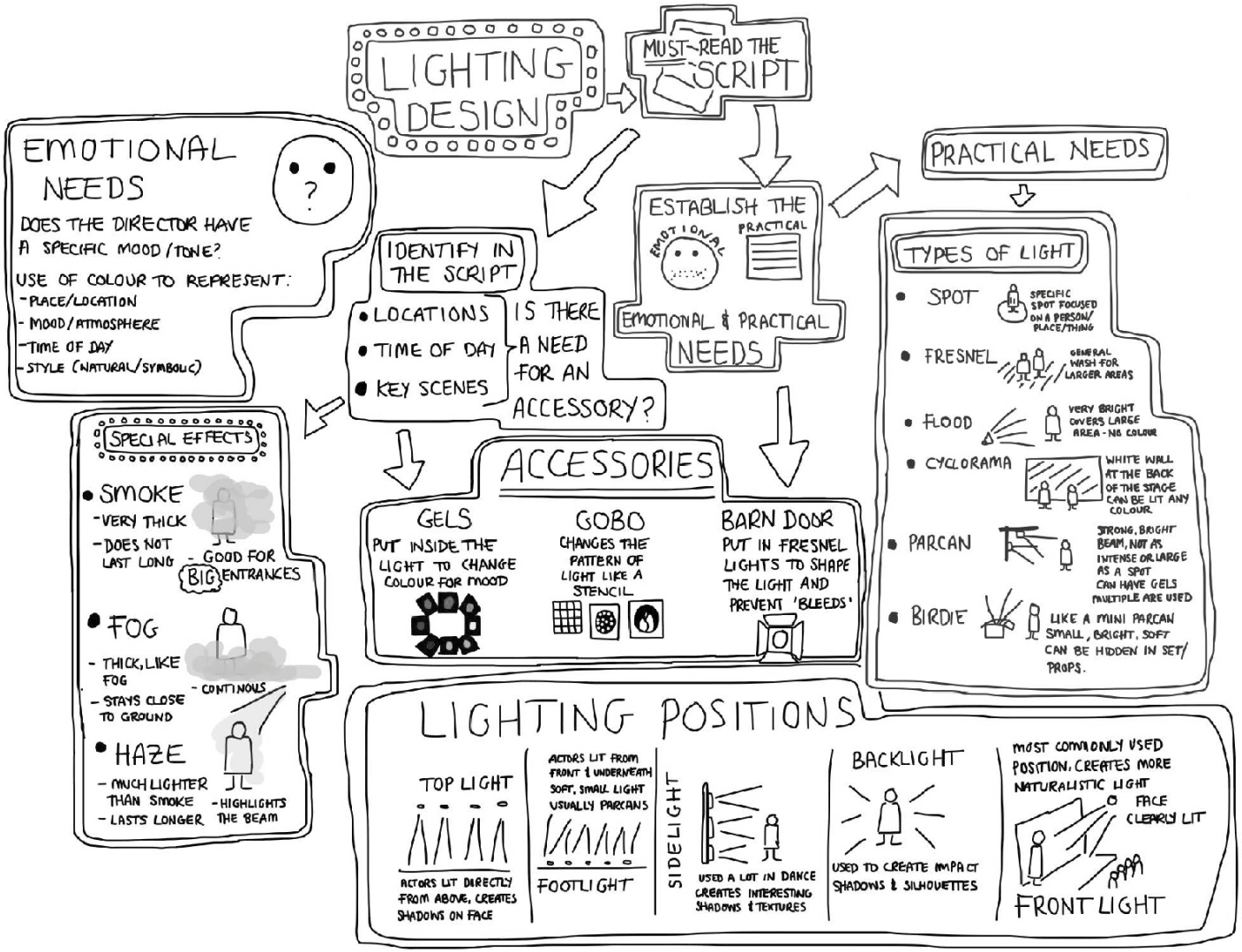
The Rhythm Tree



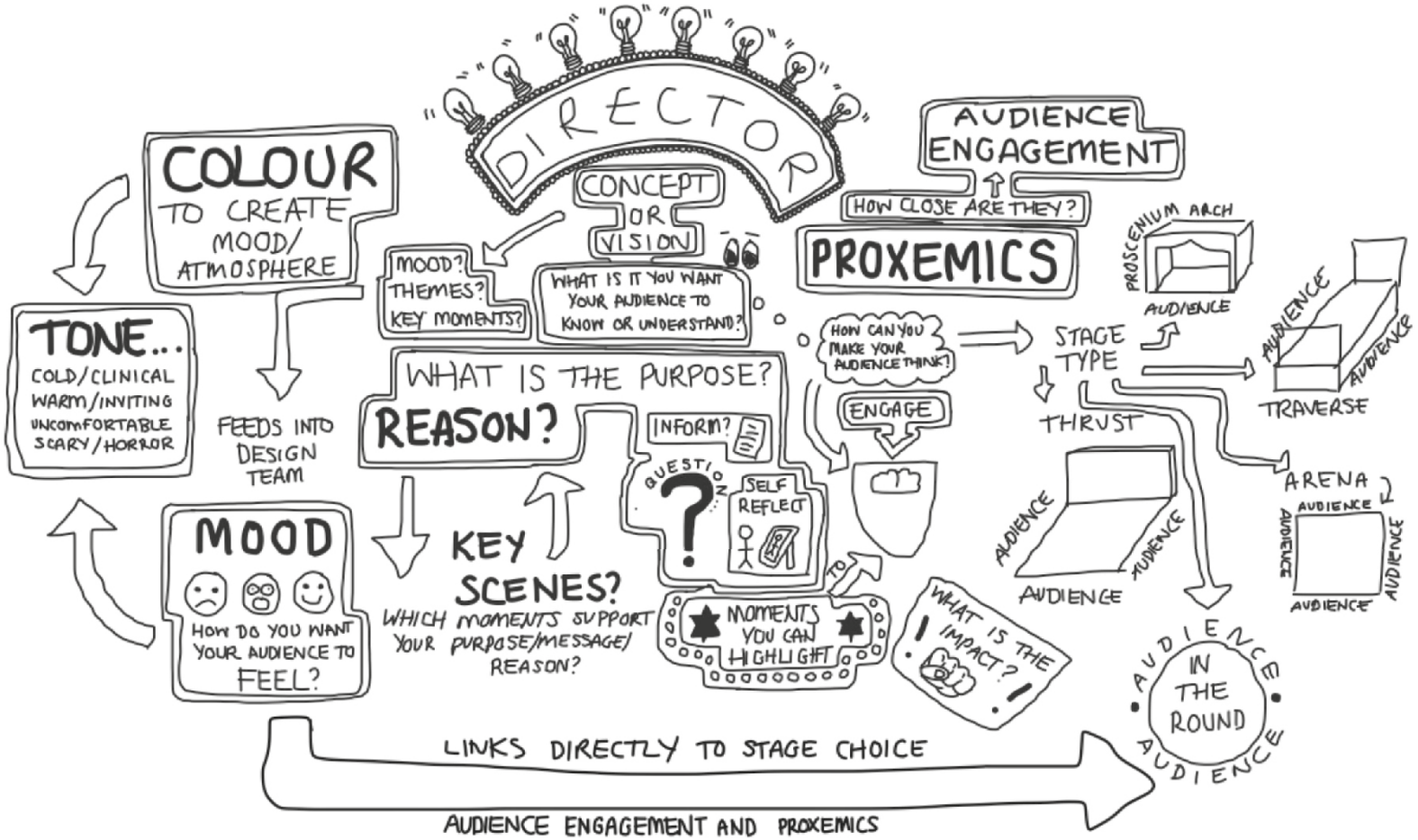


KS3DRAMA

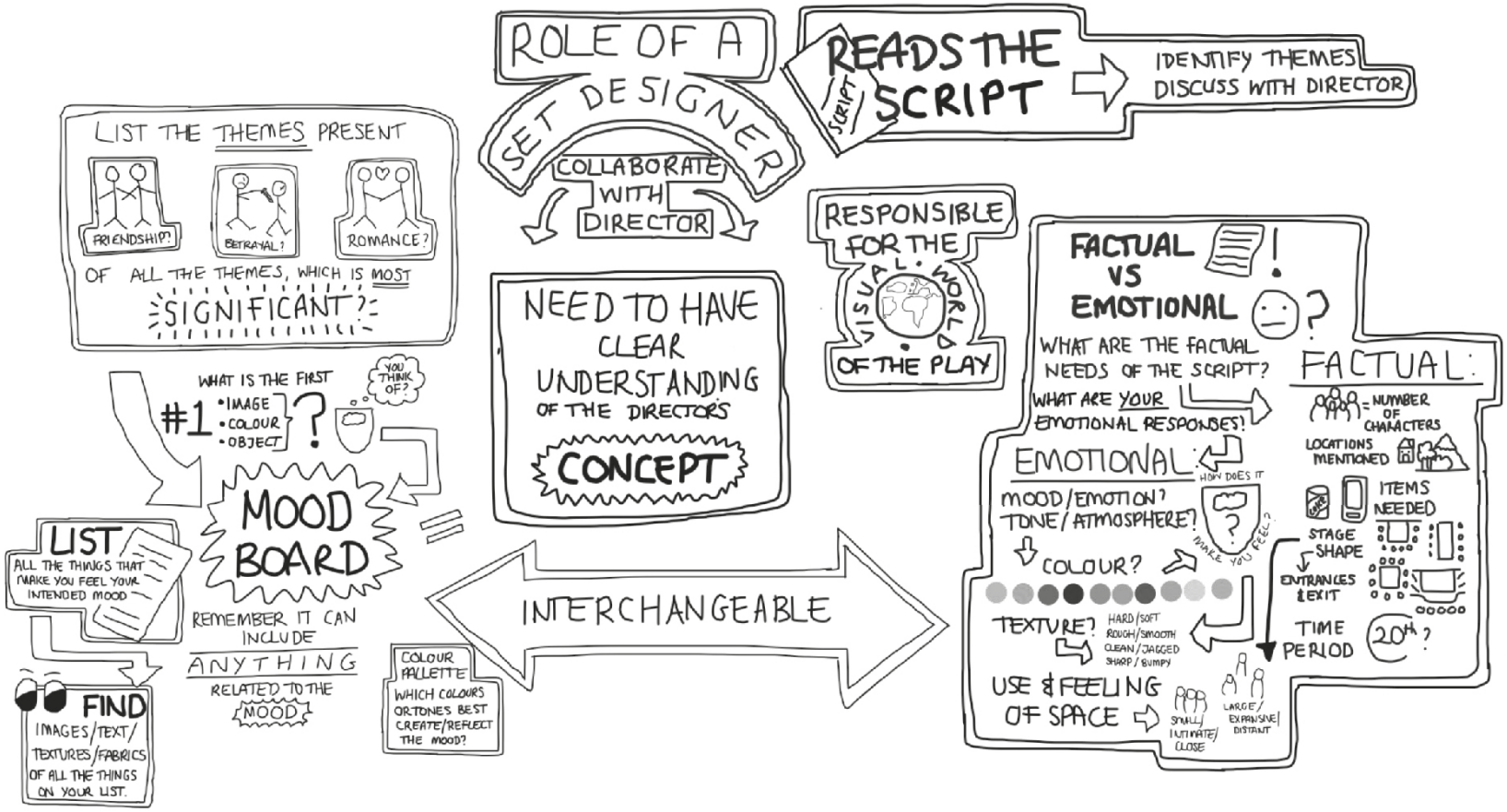
CREATIVITY COMMUNICATION COLLABORATION | COURAGE COMMITMENT COMPASSION



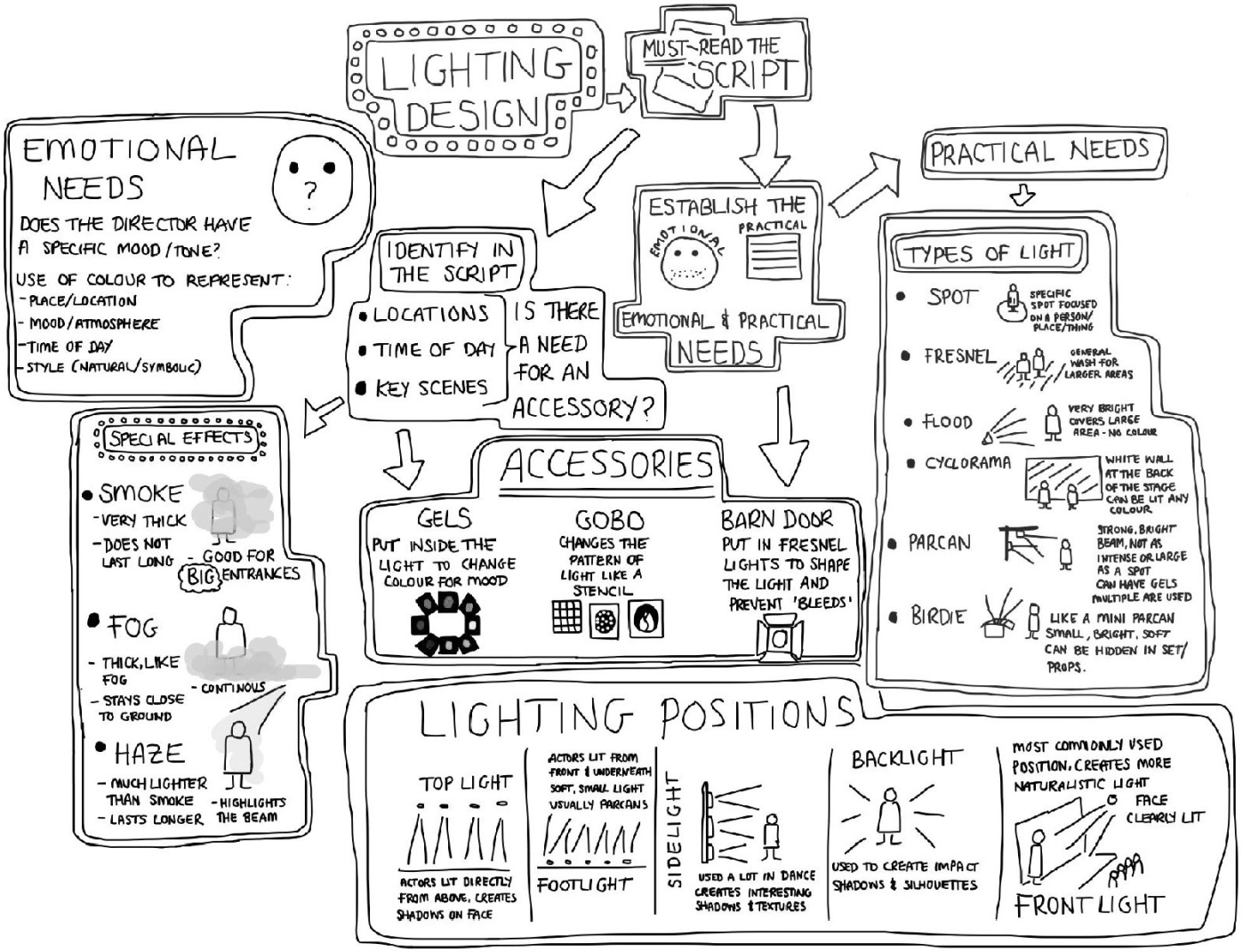
KS3DRAMA
CREATIVITY COMMUNICATION COLLABORATION
COURAGE COMMITMENT COMPASSION

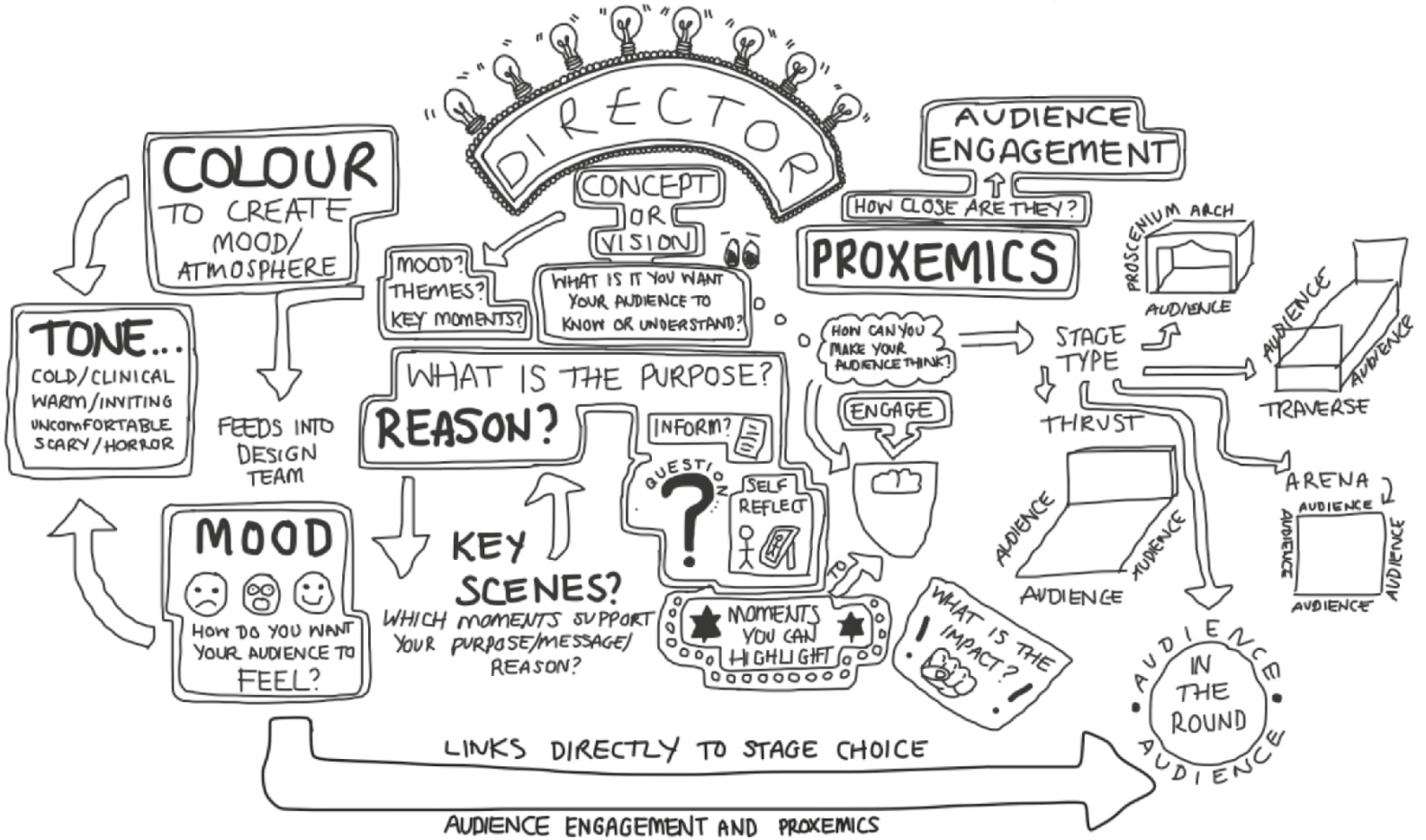


KS3DRAMA
CREATIVITY COMMUNICATION COLLABORATION
COURAGE COMMITMENT COMPASSION



GCSEDRAMA
CREATIVITY COMMUNICATION COLLABORATION
COURAGE COMMITMENT COMPASSION


LIGHTING DESIGN
MUST-READ THE SCRIPT
EMOTIONAL NEEDS
DOES THE DIRECTOR HAVE A SPECIFIC MOOD/TONE?
USE OF COLOUR TO REPRESENT:
- PLACE/LOCATION
- MOOD/ATMOSPHERE
- TIME OF DAY
- STYLE (NATURAL/SYMBOLIC)
IDENTIFY IN THE SCRIPT
• LOCATIONS
• TIME OF DAY
• KEY SCENES
IS THERE A NEED FOR AN ACCESSORY?
ESTABLISH THE
EMOTIONAL
PRACTICAL
EMOTIONAL & PRACTICAL NEEDS
PRACTICAL NEEDS
TYPES OF LIGHT
• SPOT
SPECIFIC SPOT FOCUSED ON A PERSON/PLACE/THING
• FRESNEL
GENERAL WASH FOR LARGER AREAS
• FLOOD
VERY BRIGHT COVERS LARGE AREA - NO COLOUR
• CYCLORAMA
WHITE WALL AT THE BACK OF THE STAGE CAN BE LIT ANY COLOUR
• PARCAN
STRONG, BRIGHT BEAM, NOT AS INTENSE OR LARGE AS A SPOT CAN HAVE GELS MULTIPLE ARE USED
• BIRDIE
LIKE A MINI PARCAN SMALL, BRIGHT, SOFT CAN BE HIDDEN IN SET/PROPS.
SPECIAL EFFECTS
• SMOKE
- VERY THICK
- DOES NOT LAST LONG
- GOOD FOR BIG ENTRANCES
• FOG
- THICK, LIKE FOG
- STAYS CLOSE TO GROUND
- CONTINOUS
• HAZE
- MUCH LIGHTER THAN SMOKE
- LASTS LONGER
- HIGHLIGHTS THE BEAM
ACCESSORIES
GELS
PUT INSIDE THE LIGHT TO CHANGE COLOUR FOR MOOD
GOBO
CHANGES THE PATTERN OF LIGHT LIKE A STENCIL
BARN DOOR
PUT IN FRESNEL LIGHTS TO SHAPE THE LIGHT AND PREVENT 'BLEEDS'
LIGHTING POSITIONS
TOP LIGHT
ACTORS LIT DIRECTLY FROM ABOVE, CREATES SHADOWS ON FACE
ACTORS LIT FROM FRONT & UNDERNEATH SOFT, SMALL LIGHT USUALLY PARCANS
FOOTLIGHT
SIDELIGHT
USED A LOT IN DANCE CREATES INTERESTING SHADOWS & TEXTURES
BACKLIGHT
USED TO CREATE IMPACT SHADOWS & SILHOUETTES
MOST COMMONLY USED POSITION, CREATES MORE NATURALISTIC LIGHT
FACE CLEARLY LIT
FRONT LIGHT



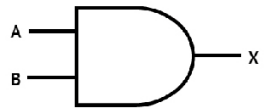
GCSEDRAMA
CREATIVITY COMMUNICATION COLLABORATION
COURAGE COMMITMENT COMPASSION

Computer Science Terms

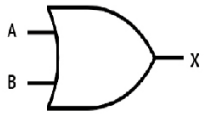
Algorithm: A series of steps designed to solve a mathematical or other problem.
Assembler: a program that translates assembly code into machine code
ASCII: is a 7-bit character set consisting of 128 different letters, numbers or punctuation symbols
Arithmetic and Logic Unit (ALU): is the part of the 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 sting.
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

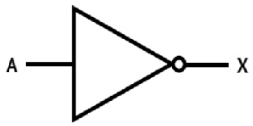
The AND logic gate is represented by the symbol:



The OR logic gate is represented by the symbol:



The NOT logic gate is represented by the symbol:





Used to indicate the start or end of an algorithm.



Used to indicate a process; for example, performing a calculation.



Used when data needs to be inputted or outputted.



Used to control the path taken through an algorithm based on the result of a condition.



Used to call a predefined algorithm.

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 X sampling rate × length of the sound (seconds) × sample resolution
Bit rate = number of channels X sample rate X bit depth (/ 8 for bytes)

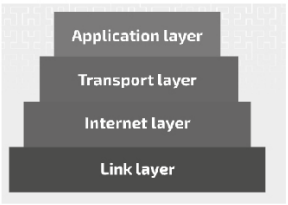
Testing Data

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 Protocols	Used to send data across the internet and most LANs.
HTTP	Hyper Text Transfer Protocol	Used by the World Wide Web to tell browsers and servers what to do.
HTTPS	Hyper Text 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.

switch variable:
  case 1:
  print(1)
  case 2:
  print(2)
  default:
  print(0)
endswitch
	This allows us to create selection in our programming using a set number of options.
	We can add a default option to account for any inputs that do not match an option.

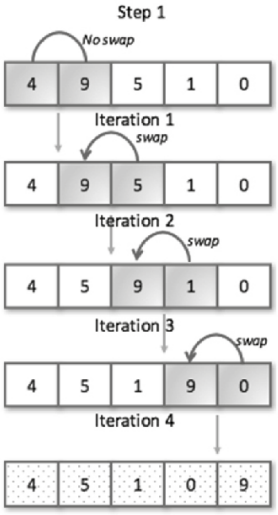
function double(parameter) return parameter *2 endfunction calling: variable = double(argument)	This allows us to store a set of instructions inside a function. We can then call the function and it will return a value.

procedure name(parameter)
  instruction 1
  instruction 2
endprocedure
 	
calling:
 	
name(argument)
	This allows us to store a set of instructions inside a procedure.
	We can then call the procedure any time we want to carry out the set of instructions.
	These differ from functions, as functions return a value.

Statement	Description
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])	This allows us to create arrays. The first is a one-dimensional array, the second is a two-dimensional array. We can then assign, amend and extract values from each element in the array.
file = openRead("text.txt") f = myfile.readline() file.close() file = openWrite("text.txt") f = myfile.writeline() file.close()	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. 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.
variable.length variable.subString(start, noOfCharacters)	These are string manipulation statements. They allow us to find out the length of a string. They also allow us to extract sections of characters out of a string.

Sorting methods

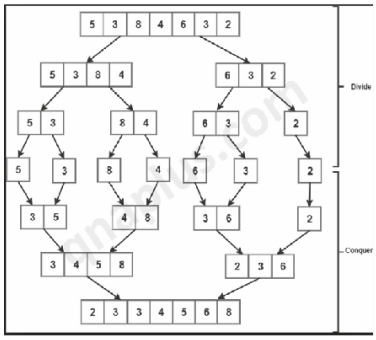
Bubble



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	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=PLcvEcrsF_9zlrs2pl_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**
- **Computerpile youtube channel – Explore the inner working of computers**
- **Cambridge GCSE computing- cambridgegcsecomputing.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

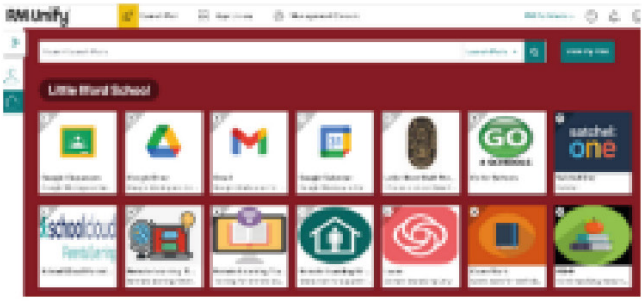
- BBC bite size - Business
- Business case studies-https://businesscasestudies.co.uk/
- BusinessEd- https://www.businessed.co.uk
- Bizzwizard playlist youtube
- 2 Teachers playlist youtube

Future Pathways

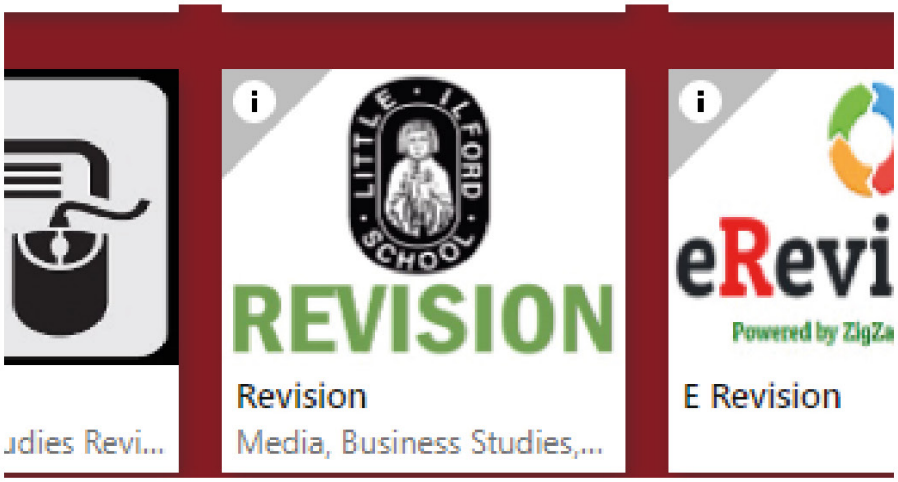
- Handshake website- helps college students get hired in firms. https://joinhandshake.com/
- GCHQ -national cyber security centre -CyberFirst courses, Girls Competition,Bursaries,apprenticeships,CyberFirst Schools/Colleges,CyberFirst resources, CyberSprinter https://www.ncsc.gov.uk/section/education-skills/schools#section_2
- 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

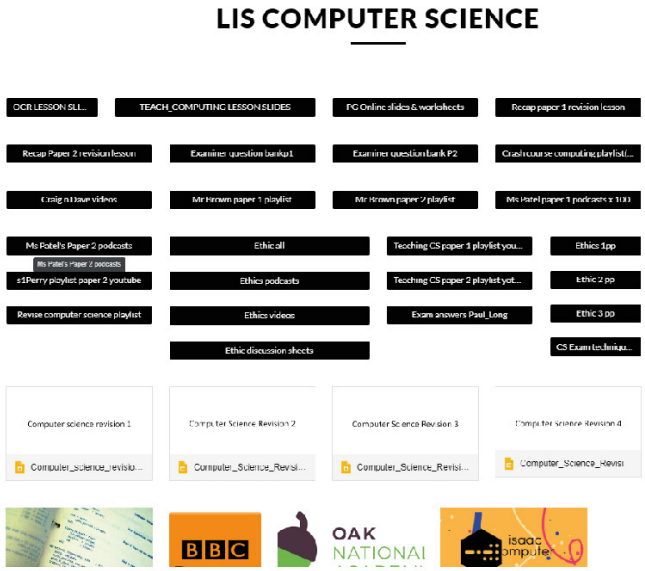
1. Log into RM Unify



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

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	$\frac{\text{(Total) Fixed costs}}{\text{quantity}}$
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.	$\frac{\text{Fixed costs}}{\text{Price – variable cost (per unit)}}$

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 GCSE Specialist Keywords

REPRESENTATION

- ☐ Synergy
- ☐ Discrimination
- ☐ Inequality
- ☐ Misrepresented
- ☐ Values & Beliefs
- ☐ Patriarchy
- ☐ Stereotypes
- ☐ Countertype
- ☐ Direct mode of address

Theories

- ☐ Binary opposite
- ☐ Bell Hooks 'Colour codes'
- ☐ Objectification
- ☐ *Zoonen*
- ☐ Alvarado's ethnicity
- ☐ Star theory
- ☐ Male Gaze
- ☐ Verisimilitude
- ☐ Heteronormative
- ☐ Hypermasculinity
- ☐ Toxic masculinity
- ☐ Spornosexual

TARGET AUDIENCE

- ☐ Mass / Niche audience
- ☐ Mainstream or specialised audience
- ☐ Social class
- ☐ Age range
- ☐ Demographic
- ☐ Gender
- ☐ Ethnicity
- ☐ Active/ Passive audiences

Theories

- ☐ **Uses and Gratification**
  - > Identity
  - > Escapism
  - > Entertainment
  - > Education
  - > Interaction
- ☐ Zeitgeist
- ☐ Jenkin's Fandom 'Prosumer'
- ☐ Schadenfreude
- ☐ Maslow
- ☐ Cultivation
- ☐ Populist
- ☐ Reception
- ☐ Butler's *'gendered'*
- ☐ Gauntlet's *'Identity'*
- ☐ Hall's *Encoding / Decoding*

INSTITUTION

- ☐ Informative
- ☐ Entertainment
- ☐ Infotainment
- ☐ Brand
- ☐ Product
- ☐ Theme
- ☐ Endorsement
- ☐ Ownership
- ☐ Regulation
- ☐ Producers
- ☐ Consumers
- ☐ Conglomerates
- ☐ New technologies

Theories

- ☐ Hegemony

LANGUAGE

- ☐ **Mise-en-ecene**
  - >Lighting
  - >Camera Shot/Angles
  - >Costume
  - >Set design & props
  - >Body and facial language
- ☐ Codes
  - >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

Theories

- ☐ Todorov's Narrative
- ☐ Semiotics / Signs
- ☐ Privileged spectator position

CONTEXT

- ☐ Historical
- ☐ Gender
- ☐ Cultural
- ☐ Social
- ☐ Political

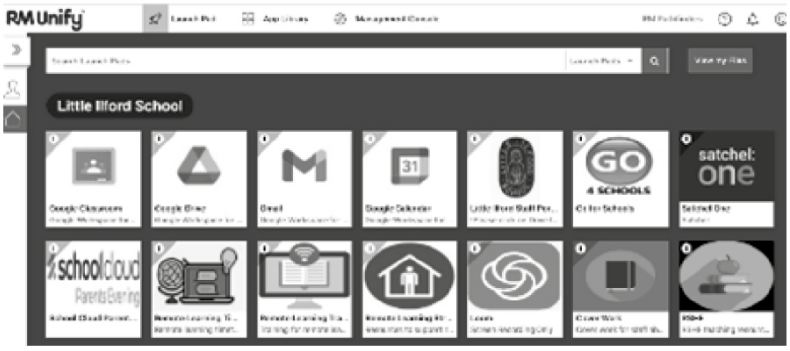
Theories

- ☐ Genre Theory
- ☐ Marxist
- ☐ Feminist
- ☐ Neales
- ☐ 3rd wave feminism
- ☐ 4th wave feminism

Media

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

1. Log into RM Unify



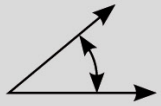
2. Click on the Media tile



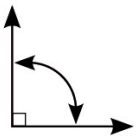
3. Access the Media Studies GCSE website



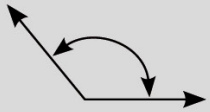
Mathematics - shape & space



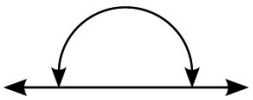
An **acute angle** is less than 90°



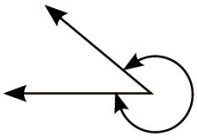
A **right angle** is 90°



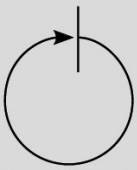
An **obtuse angle** is more than 90° and less than 180°



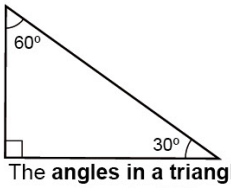
A **straight angle** is 180°



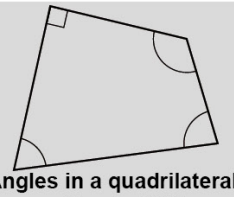
A **reflex angle** is more than 180°



Around a point is 360°



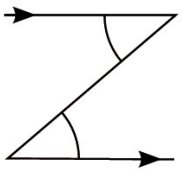
The **angles in a triangle** add up to 180°



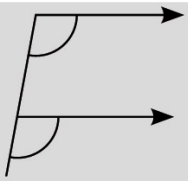
Angles in a quadrilateral add up to 360°



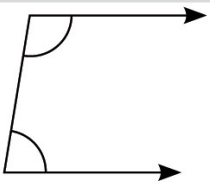
Vertically opposite angles are equal



Alternate angles are the same

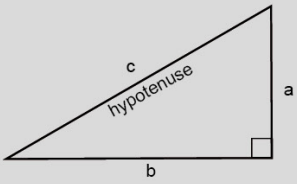


Corresponding angles are the same



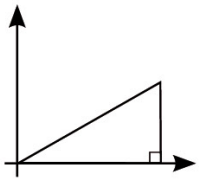
Supplementary angles add up to 180°

Trigonometry



Pythagoras' theorem

$c^2=a^2+b^2$

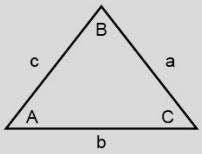


$\sin\theta = \frac{O}{H} = \frac{\text{opposite}}{\text{hypotenuse}}$ SOH

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

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

Remember! SOH CAH TOA



Sine law

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

Cosine law

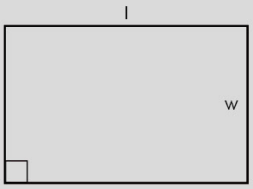
$a^2 = b^2+c^2-2bc\cos A$

$b^2 = b^2+c^2-2bc\cos A$

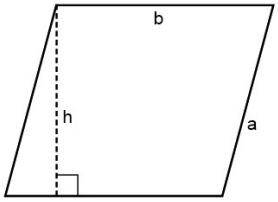
$c^2 = b^2+c^2-2bc\cos A$

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

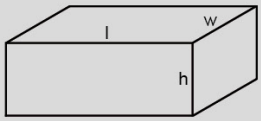
Perimeter, area & volume



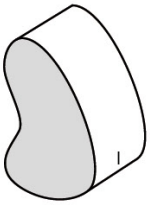
Rectangle
Perimeter = 2 (l+w)
Area = l x w



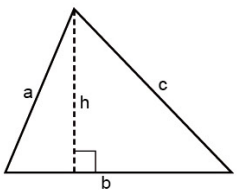
Parallelogram
Perimeter = 2 (a+b)
Area = b x h



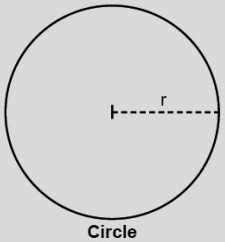
Cuboid
Volume = l x w h



Prism
Volume = cross section area x l



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



Circle
Circumfrence = 2πr
Area = πr^2

REMEMBER!

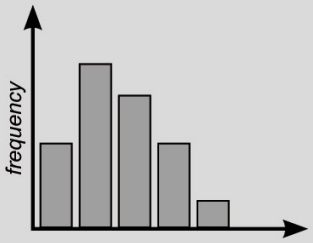
Perimeter is the 1-D length around a shape: m, cm
Area is the 2-D space inside a shape: m2, cm2
Volume is the 3-D space inside a solid: m3, cm3
Capacity is the amount something can hold: l, ml
Remember to start with the same UNITS

Mathematics - data

BIDMAS

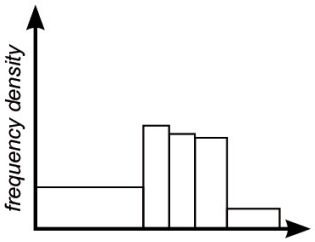
Brackets
Indices
Division
Multiplication
Addition
Subtraction

Bar graph



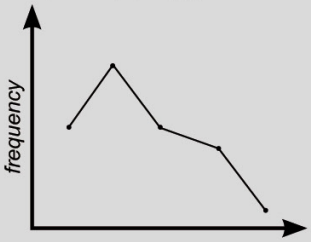
Used for discrete data.
Bars are all the same width.
Bar height represents frequency

Histogram



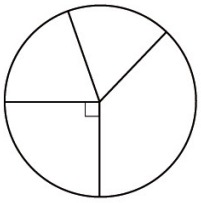
Used for continuous numerical data which has been classified into groups. Bars may be different widths. The area of the bar represents frequency.

Frequency polygon



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

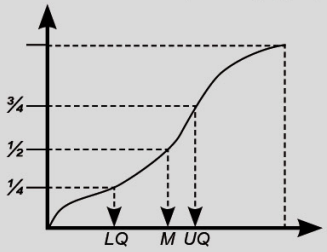
Pie chart (Pie graph)



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

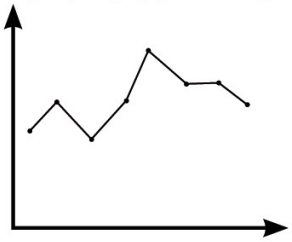
The angles should add up to 360°
Used to show proportions of an indentifiable whole.

Cumulative frequency graph



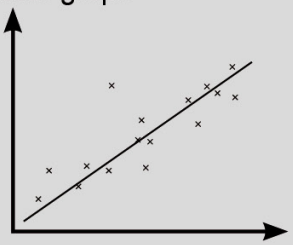
Useful for estimating median & quartiles for grouped data. Plot at the top end of the groups.

Line graph (jagged line graph)



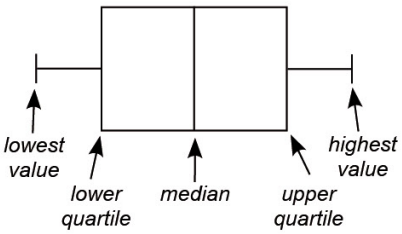
Used for continuous data. Shows relationship between two variables.

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 seperately. E.g. **243 x 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

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	94
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	95	108	120	132	144

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	$\frac{1}{8}$
33⅓%	0.3	$\frac{1}{3}$

etc.

Multiplying and diving negative numbers

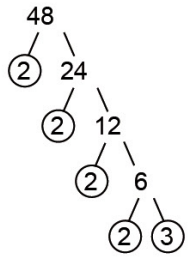
When the signs are different (i.e. positive and negative) the answer is negative.

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.



=2x2x2x2x3

=2^4x3

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

3 + s	*means* "3 plus s"
	or "s more than 3"
a - 5	*means* "take 5 from a"
	or "5 less than a"
4b	*means* "4 multiplied by b" *or* "4 lots of b"
k/2	*means* "k divided by 2"
v^2	*means* "v x v"
	or "v squared"

Simplifying by collecting like terms

e.g. 3a + 4b - 2a + b - 3c

Circle the first type of like terms. Collect them together.

= (3a) + 4b - (2a) + b - 3c

= (3a) - (2a) + 4b + b - 3c

Underline the next set of like terms. Collect them together.

= 3a - 2a + **4b** + **b** - 3c

= (a) + **5b** - 3c

Continue and tidy up!

= a + 5b - 3c

Indices (powers)

p^2	means p x p
p^3	means p x p x p
p^n	means p x p x ... x p (n times)
p^1	= p
p^o	= 1
p^{-n}	means $1/p^n$ e.g. $3^{-2} = 1/3^2 = 1/9$
$p^{1/n}$	mean $\sqrt[n]{p}$ e.g. $27^{⅓} = \sqrt[3]{27} = 3$

Remember - common mistake!

a^2 = a x a *and* 2a = 2 x a

so

a^2 + 2a *cannot be simplified further as* a^2 *is not LIKE* a *!!!*

Rules of indices

$a^x \times a^y = a^{x+y}$

$a^x \div a^y = a^{x-y}$

$(a^x)^y = a^{xy}$

Simplifying expressions

DEAL WITH THE DIGITS AND THEN WITH THE INDICES!!!

e.g. $6a^2b \times 3ab^3$

$= 6x3 \times a^2 x\ a \times b \times b^3$

$= 18 \times a^{(2+1)} \times b^{(1+3)}$

e.g. $6a^2b \div 3ab^3$

$= 6 \div 3 \times a^2 \div a \times b \div b^3$

$= 2 \times a^{(2+1)} \times b^{(1-3)}$

$= 2ab^{-2}$

Multiplying brackets grid method

Multiplying brackets grid method

a(b+c)

x	b	c
a	ab	ac

= ab + ac

Multiplying brackets grid method

a(b-c)

x	b	-c
a	ab	-ac

= ab - ac

Multiplying double brackets

(a+b)(a+c)

x	a	b
a	a^2	ab
c	ac	cb

$= a^2 + ab + ac + bc$

An example of multiplying to get a quadratic equation

(a+2)(a-3)

x	a	-3
a	a^2	-3a
2	2a	-6

$= a^2 - 3a + 2a - 6$

$= a^2 - a - 6$

Quadratic formula

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

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

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	most reactive
Sodium	
Calcium	
Magnesium	
Aluminium	
Carbon	
Zinc	
Iron	
Tin	
Lead	
Hydrogen	
Copper	
Silver	
Gold	
Platinum	least reactive

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

2. Formulae of Some Common Ions

Positive ions		Negative ions	
Name	Formula	Name	Formula
Hydrogen	H^+	Chloride	Cl^-
Sodium	Na^+	Bromide	Br^-
Silver	Ag^+	Fluoride	F^-
Potassium	K^+	Iodide	I^-
Lithium	Li^+	Hydroxide	OH^-
Ammonium	NH_4^+	Nitrate	$N0_3^-$
Barium	Ba^{2+}	Oxide	O^{2-}
Calcium	Ca^{2+}	Sulfide	S^{2-}
Copper(II)	Cu^{2+}	Sulfate	SO_4^{2-}
Magnesium	Mg^{2+}	Carbonate	CO_3^{2-}
Zinc	Zn^{2+}		
Lead	Pb^{2+}		
Iron(II)	Fe^{2+}		
Iron(III)	Fe^{3+}		
Aluminium	Al^{3+}		

Turn over ►

Periodic Table

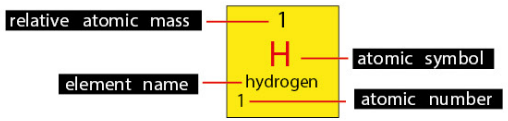
The Periodic Table lists all the elements that have been discovered.
Learn to use it by finding patterns and trends in the characteristics of different elements.

GROUP 1	2											3	4	5	6	7	0
							1 H hydrogen 1										4 He helium 2
7 Li lithium 3	9 Be beryllium 4											11 B boron 5	12 C carbon 6	14 N nitrogen 7	16 O oxygen 8	19 F fluorine 9	20 Ne neon 10
23 Na sodium 11	24 Mg magnesium 12											27 Al aluminium 13	28 Si silicon 14	31 P phosphorus 15	32 S sulphur 16	35.5 Cl chlorine 17	40 Ar argon 18
39 K potassium 19	40 Ca calcium 20	45 Sc scandium 21	48 Ti titanium 22	51 V vanadium 23	52 Cr chromium 24	55 Mn manganese 25	56 Fe iron 26	59 Co cobalt 27	59 Ni nickel 28	63.5 Cu copper 29	65 Zn zinc 30	70 Ga gallium 31	73 Ge germanium 32	75 As arsenic 33	79 Se selenium 34	80 Br bromine 35	84 Kr krypton 36
85 Rb rubidium 37	88 Sr strontium 38	89 Y yttrium 39	91 Zr zirconium 40	93 Nb niobium 41	96 Mo molybdenum 42	[98] Tc technetium 43	101 Ru ruthenium 44	103 Rh rhodium 45	106 Pd palladium 46	108 Ag silver 47	112 Cd cadmium 48	115 In indium 49	119 Sn tin 50	122 Sb antimony 51	128 Te tellurium 52	127 I iodine 53	131 Xe xenon 54
133 Cs caesium 55	137 Ba barium 56	139 La lanthanum 57	178 Hf hafnium 72	181 Ta tantalum 73	184 W tungsten 74	186 Re rhenium 75	190 Os osmium 76	192 Ir iridium 77	195 Pt platinum 78	197 Au gold 79	201 Hg mercury 80	204 Tl thallium 81	207 Pb lead 82	209 Bi bismuth 83	[209] Po polonium 84	[210] At astatine 85	[222] Rn radon 86
[223] Fr francium 87	[226] Ra radium 88	[227] Ac actinium 89	[261] Rf rutherfordium 104	[262] Db dubnium 105	[266] Sg seaborg ium 106	[264] Bh bohrium 107	[277] Hs hass ium 108	[268] Mt meitnerium 109	[271] Ds darmstadtium 110	[272] Rg roentgenium 111	[285] Cn Copernicium 112	[286] Nh Nihonium 113	[289] Fl Flerovium 114	[289] Mc Moscovium 115	[293] Lv Livermorium 116	[294] Ts Tennessine 117	[294] Og Oganesson 118

* Lanthanoids	140 Ce cerium 58	141 Pr praseodymium 59	144 Nd neodymium 60	145 Pm promethium 61	150 Sm samarium 62	152 Eu europium 63	157 Gd gadolinium 64	159 Tb terbium 65	163 Dy dysprosium 66	165 Ho holmium 67	167 Er erbium 68	169 Tm thulium 69	173 Yb ytterbium 70	175 Lu lutetium 71
** Actinoids	232 Th thorium 90	[231] Pa protactinium 91	238 U uranium 92	[237] Np neptunium 93	[242] Pu plutonium 94	[243] Am americium 95	[247] Cm curium 96	[245] Bk berkelium 97	[251] Cf californium 98	[254] Es einsteinium 99	[253] Fm fermium 100	[256] Md mendelevium 101	[254] No nobelium 102	[257] Lr lawrencium 103

Please note: Where elements do not have a stable isotope, the relative atomic mass is given in square brackets

KEY



STATE AT ROOM TEMPERATURE

- Bl Black=solid
- Blu Blue=liquid
- Re Red=gas
- Gr Grey=unknown

BACKGROUND COLOUR

Alkali metals | Alkaline Earth metals | Metals | Semi-metals | Non-metals | Halogens (non-metals) | Noble gases (non-metals)

Learn more about the Periodic Table & the Elements at www.periodicvideos.com

The information in this Periodic Table was guided by the specifications and exam papers of OCR, Edexcel and AQA. Four new element names have also been included, reflecting the most recent updates to the official IUPAC Periodic Table.

Physics Equations Sheet
GCSE Physics (8463)

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

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 hypothes is.

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 ±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 vanable.

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.

Command words in GCSE Biology

By KATIE ROSS

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 Punnet 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 famers 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.

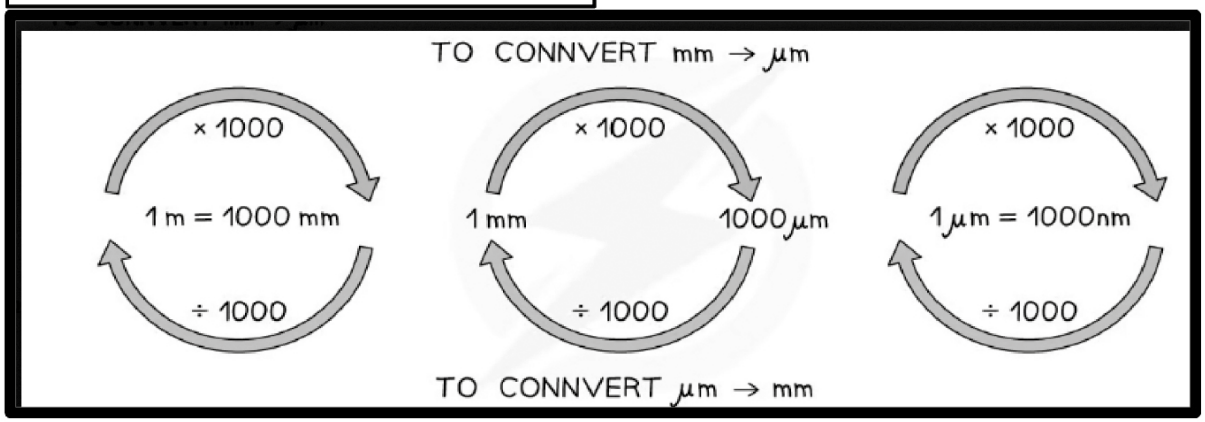
Common evaluate questions in Biology are*: Different forms of contraceptives; IVF; genetic engineering; intensive farming; light or electron microscopes; stem cells; treatments for cardiovascular disease*. Once again, get practising!

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 hov 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 3.497 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 13**00**
    - 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 3
- 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 3097
    - e.g. 9 is the **third** significant figure of 3097
- Use the **normal rules for rounding**
  - Circle the number to the right
  - Use this to determinant whether the given significant figure rounds up or rounds off