ARCHBISHOP BECK CATHOLIC SPORTS COLLEGE

EXAM PREPARATION SUPPORT PACK



BEING PREPARED IS THE KEY TO EXAM SUCCESS

- Independent learning resources
- Planning your time
- How to revise
- How to answer exam questions
- How to avoid stress
- Subject specific guidance



INDEPENDENT LEARNING RESOURCES FOR GCSE

Exam board websites

Revision websites

Apps

YouTube



Past exam papers and mark schemes: Edexcel



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Past Papers

Results

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You are here: Home > I am a ... > Student and learner > Past Papers and Mark Schemes

Past Papers and Mark Schemes

Past papers are a handy way to check the level of the questions you'll need to answer in an exam. This makes them a great revision tool.

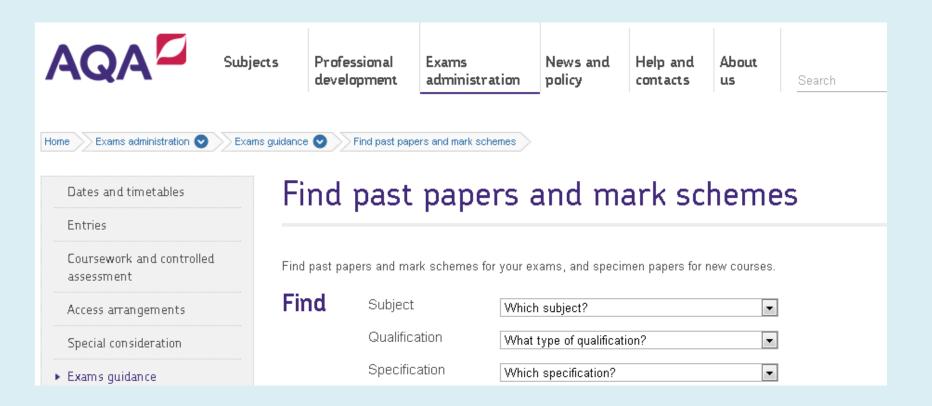
Which past papers are available?

- · Question papers and mark schemes more than nine months old for most qualifications
- All functional skills question papers and mark schemes except for those from the previous two
 exam sessions.



www.edexcel.com

Past exam papers and mark schemes: AQA



www.aqa.org.uk

Past exam papers and mark schemes: WJEC



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Teachers

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Examiners and Moderators

Students and

Students and Parents:

The Examination Process

You are here: Students and Parents » (

GCSE past papers

www.wjec.co.uk

Other revision websites



www.bbc.co.uk/schools/gcsebitesize/

Other revision websites

revisionworld :::				
GCSE REVISION	AS & A2 LEVEL	MY TIMETABLE	UNI & JOBS	

Home » GCSE Revision

GCSE Revision

Welcome to the GCSE exam revision section where we provide free revision resources for a range of subjects including Applied Science, Biology, Chemistry, English, French, Geography, German, History, ICT, Maths, PE, Physics and RS. We are constantly improving the content so keep checking back. Click on any of the links below to view each subject.

Applied Science	Biology (GCSE Revision)	C
Business Studies 3	Chemistry (GCSE Revision)	C
English Language 3	English Literature	C
French (GCSE Revision)	Geography (GCSE Revision)	C
German (GCSE Revision)	History (GCSE Revision)	C
ICT (GCSE Revision)	Maths (GCSE Revision)	C
PE (Physical Education - GCSE Revision	Physics (GCSE Revision)	C
RS (Religious Studies - GCSE Revision)	Science	C
STUDY HELP 3		

www.revisionworld.co.uk

www.getrevising.co.uk





Organise your time

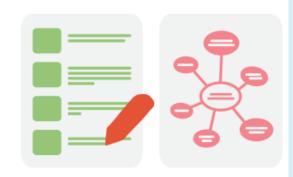
The Study Planner is a smart calendar for your academic life. Organise your free time for studying and revision, prioritise your toughest subjects and receive reminders when your work is due.

Get started ▶

Create smart resources

Break down class notes into revision cards, plan essays with a mindmap or revise for an exam with flashcards. You can also make quizzes and crosswords to test friends.

Create now ▶



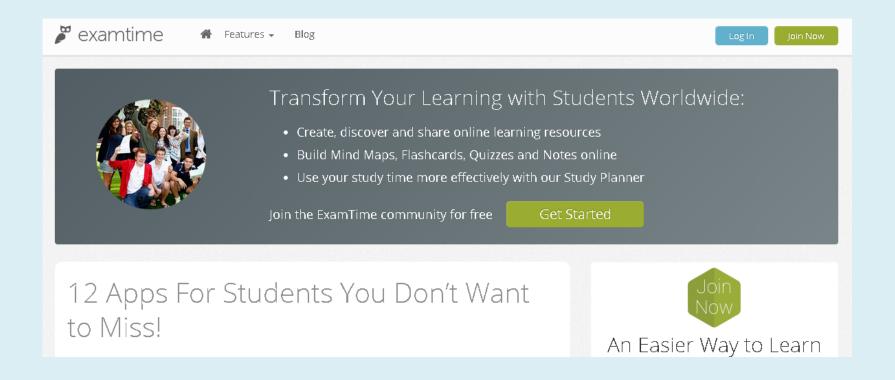


Start a discussion

Meet students studying your subjects, share ideas and help each other out. Get creative with shared whiteboards or recommend study resources.

Discuss now >

www.examtime.co.uk



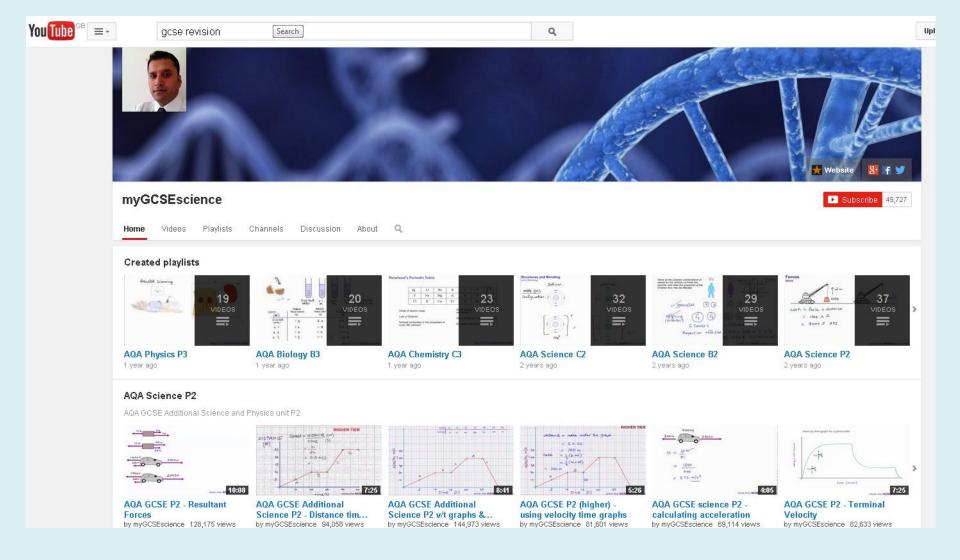
Apps

ExamTime allows you to **create online Mind Maps**, **Flashcards**, **Online Notes and Quizzes**. All of these online study tools are designed to help you improve your learning and prepare for exams. Never before has it been easier to create your online study resources and share them with your classmates. Plus all your notes are stored in one place.



ExamTime also has a whole bunch of other tools such Study Groups, Private Messaging, Online Calendar and Study Planner. If you've not tried it yet, what are you waiting for? ExamTime is a web-app, that means you can access it via the browser on your phone or mobile device. It is **optimized for all types of touch devices** and easy and quick to you. There is no excuse for not using the best technology available when it comes to you studies!

YouTube



Effective revision strategies

BE ORGANISED: Consider these questions before you start;

- 1. What equipment, resources will I need to revise?
- Where am I going to work? Is in front of the window or the television really a good plan?
- What are the distractions to my learning? (Turn your mobile phone / facebook off and limit yourself to checking it in your allotted breaks)

REVISION STRATEGIES

You learn;

10% of what you read

20% of what you hear

30% of what you see

50% of what you see and hear

70% of what you discuss

80% of what you experience

95% of what you teach others



Revision tips: planning your time

- 1. Start your revision in good time.
- 2. Plan a revision timetable.
- 3. Highlight coursework deadlines and examination dates and times.
- 4. Spread your subjects out over time so you cover each one several times.
- 5. Plan for half-hour or at most one-hour slots. Any more of one subject and nothing extra may sink in.
- 6. In the evenings after school, plan one or two subjects only. Leave some time for relaxation.
- 7. Allow yourself some days off but not in the weeks leading up to your examinations.
- 8. Plan to revise specific topics or aspects of a subject, for example not just science but human systems, or waves, or chemical reactions, or electricity.

Getting started

Use this to list what you have to do before your exams.

GCSE Topics for revision		
Subject	Topics / Details	

Time management

Students typically need 30-90 minutes to properly revise each of the 200-300 topics in the subjects they're taking. This means setting aside at least 200 hours and revising for an average of 1-2 hours per day from 3-6 months before your exams start!

Changing your daily routine

A good way to find time for revision is by changing your routine :

- Create a table and note down your typical activities.
- 2. Make changes that enable you to revise for 1-2 hours per day.

Time	weekdays	Weekends	
0800	Travel to school	Get ready / Have breakfast	
0900	Lessons	Revision	
1000	Lessons	Revision	
1100	LESSONS	Travel into town	
1200	LESSONS	Go to the gym	
1300	Lunch	Go to the gym	
1400	Lessons	Lunch	
1500	Football practice	shopping / Socialising	
1600	Football practice	Shopping / Socialising	
1700	Walk home with Sam	shopping/Socialising	
1800	Dinner	Travel from town	
1900	Homework	Dinner	
2000	Revision	Out with sam / friends	
2100	Relax/My time	Out with Sam / friends	

Estimating your revision time

Before doing anything else, check that your new daily routines are ambitious, but realistic. After making some final adjustments, you can estimate the total amount of time available for revision:

Multiply the time that you intend to revise on average each day by the total number of days between now and your first exam.

```
15 weeks until my first exam

15 x 5 = 75 weekdays x 2 hours = 150 hours on weekdays

15 Saturdays x 3 hours = 45 hours on Saturdays

15 Sundays x 3 hours = 45 hours on Sundays
```

Add these three totals together.

```
150 hours + 45 hours + 45 hours = 240 hours
```

Subtract the number of days when you know that it will be difficult for you to revise (e.g. if you're going to a wedding).

```
unavailable on 5 weekdays x 2 hours = 10 hours
unavailable on 5 Saturdays or Sundays x 3 hours = 15 hours
unavailable for a total of 10 hours + 15 hours = 25 hours
Total time available: 240 hours - 25 hours = 215 hours
```

Assume you've underestimated the number of days when it will be difficult for you to revise by reducing this figure by 10-20 hours.

Total revision time: 215 hours - 15 hours = 200 hours

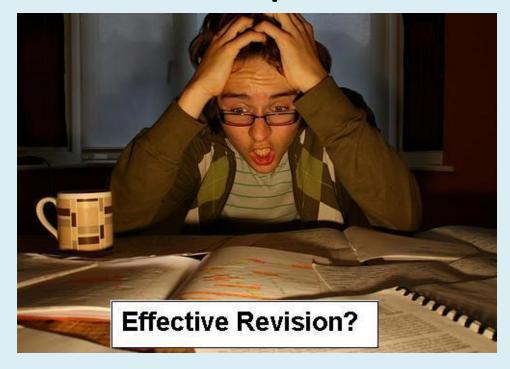
A revision timetable tells you what you need to revise each day and puts you in control of your revision.

	English	Maths	Biology	French	Geography	TOTAL
мон.		Fractions (1 hour)		25/01/11	Settlement (1 hour)	2 hours
Tues.			Enzymes (1 hour)	Transport (1 hour)		2 hours
Wed.	Travel writing (1 hour)				Trade/Aid (1 hour)	2 hours
Thurs.		vectors (1 hour)		Sport (1 hour)		2 hours
Fri.	Attending Open Day at Stonebridge FE College			o hours		
sat.	Poetry (1 hour)	Triangles (1 hour)			Volcances (1 hour)	3 hours
Sun.			Disease (2 hours)	Holidays (1 hour)		3 hours
	2 hours	3 hours	3 hours	3 hours	3 hours	14 hour

When creating revision timetables, rather than trying to revise *all* your subjects every week, focus on revising half of the subjects you're taking one week and the other half the following week, etc.

How can I revise?

Are there any techniques that will help me?



What can I do to revise?

Use pictures to associate with key words

Put revision aids around the house

Highlight key points in notes or books Make posters and stick them on the wall

Make spider diagrams



Tell someone what you have learnt

Use
mnemonics –
making a
rhyme from
the first letters

Read a page – shut the book.

Make notes on what you can remember

Ask parents or friends to test you

Record yourself saying key points and play back



Chunking

Chunking is breaking up a big piece of information into smaller chunks rather like steps in a ladder. It can be used for numbers and words. Often students use bullet points to break up information.

- Small chunks
- Steps in ladder
- Numbers and words
- Breaks up info

Mnemonics

Mnemonics help you to remember by using short words that stand for something to help you.

Here is a Mnemonic for REVISION.

Rest

Exercise

Variety

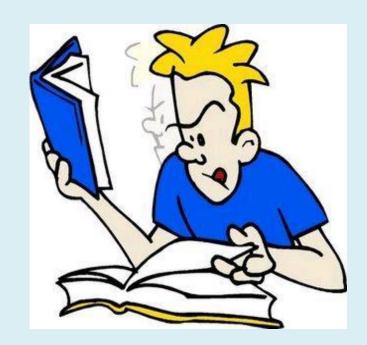
Imagination

Structure

Individual

Ongoing

Not too long



Testing yourself.

Give yourself 30 seconds to memorise the 15 words listed on the next slide and then write down as many as you can in any order.

Read through the story and then try to tell it to someone else.

Use your memory of the story to help you try to recall the 15 words a second time.



Airport Imagine that you wake-up at an airport Blanket wrapped-up in a blanket that is made of **Flags** flags. An old monk comes over and quietly Monk whispers that you should go to the café Café upstairs to meet your friends. When you arrive at the café there is a foul-smelling Dragon dragon sitting on a block of ice and Ice Skull opposite him is a beautiful girl sitting on a giant skull. They are drinking tea and Tea Cards playing cards. Suddenly the girl throws a Book card at you which, when you catch it, Shell transforms into a little book. You look up again but the dragon and the girl have Crystal Teeth vanished. All that is left at their table is a

shell full of crystal teeth.

Example: ICT

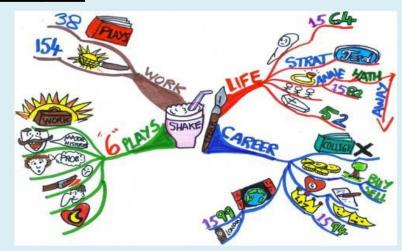
During ICT exams you may need to remember the pros and cons of different methods of communication. Here are 5 advantages and 5 disadvantages of using email:

Advantages	Disadvantages
Emails can be sent at any time of day	Private information can be easily forwarded
Computer files can be attached	Content can be misinterpreted
Very swift speed of delivery	Computer might be infected by viruses
Emails can be sent all over the world	You might receive lots of spam
Very low delivery costs	Computer thieves can access old emails

Imagine that you leave home with your new laptop and the sun's shining (advantages of email). You walk to a 24 hour supermarket (sent any time of the day). You hang your laptop bag on a trolley (files can be attached) and dash around the shop (swift delivery) picking up lots of exotic food (sent across the world) that cost just 1p in total (low delivery costs). When you leave the shop it's pouring with rain (disadvantages of email). A complete stranger tells you your bank account details (private information easily forwarded) and also that your friend never wants to see you again (misinterpretation). You get on the bus to go home and feel unwell (computer viruses). Someone tries to sell you a sweet wrapper (spam) and a passenger runs off with your laptop (thieves can access old emails).

Mind maps

Mind maps are good for remembering topics and sub-topics such as characters in a book or key vocabulary and concepts. Labels can be added and the use of colours helps to identify and group thoughts.

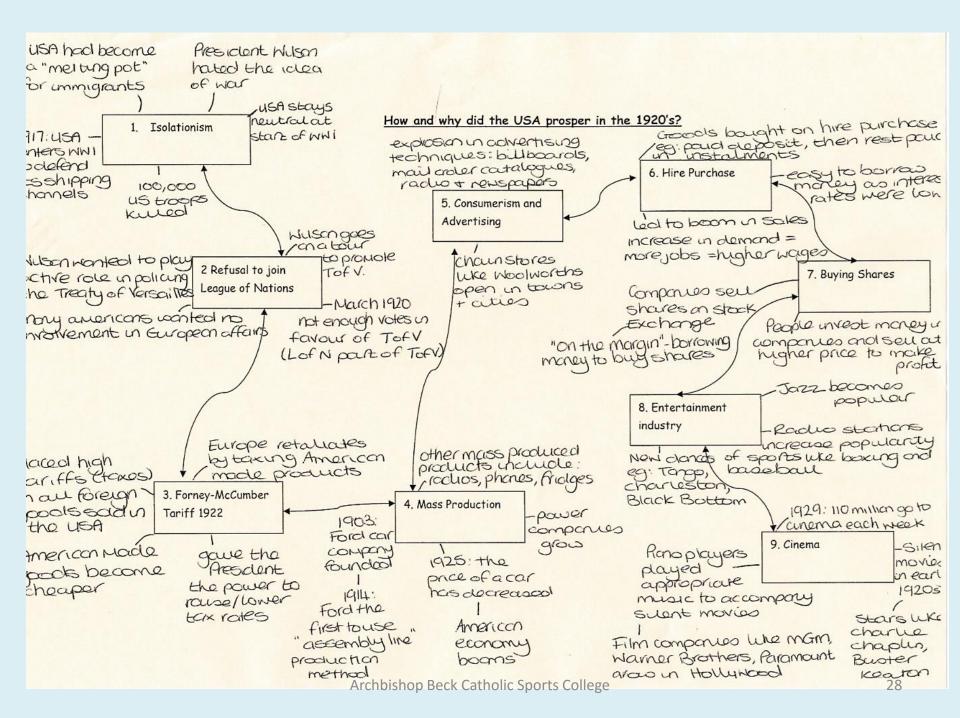


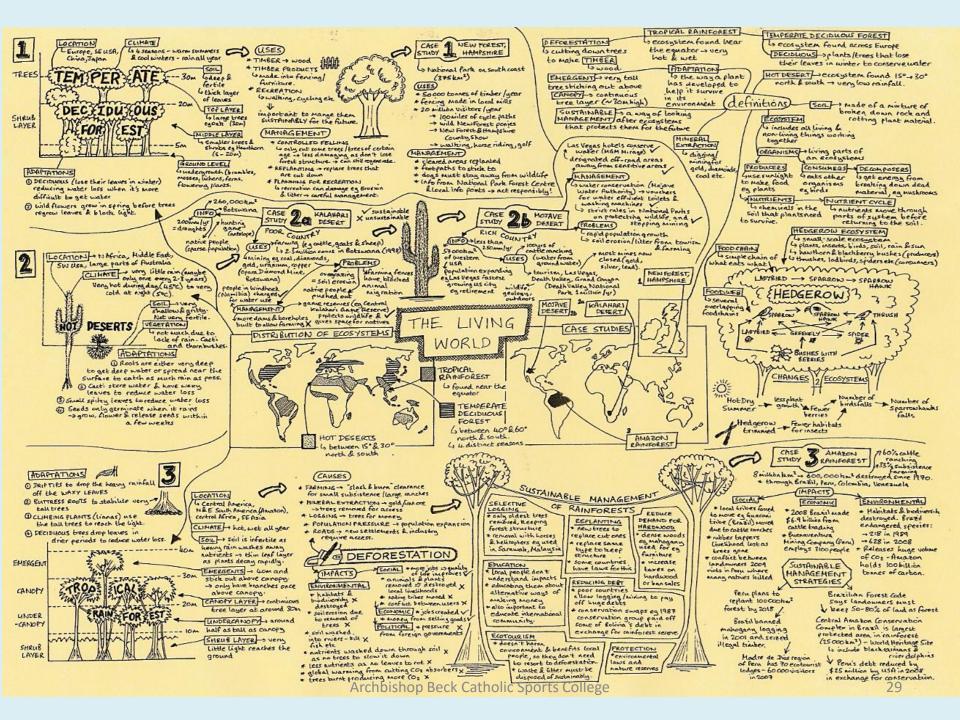
- Write the MAIN TOPIC in the middle
- From each KEY POINT draw a branch out from the main topic
- Write a KEY WORD or PHRASE on each branch
- Build out further branches and add DETAILS
 - Add diagrams, pictures and symbols where you can
 - Highlight links and connections
 - Be creative and personalise it

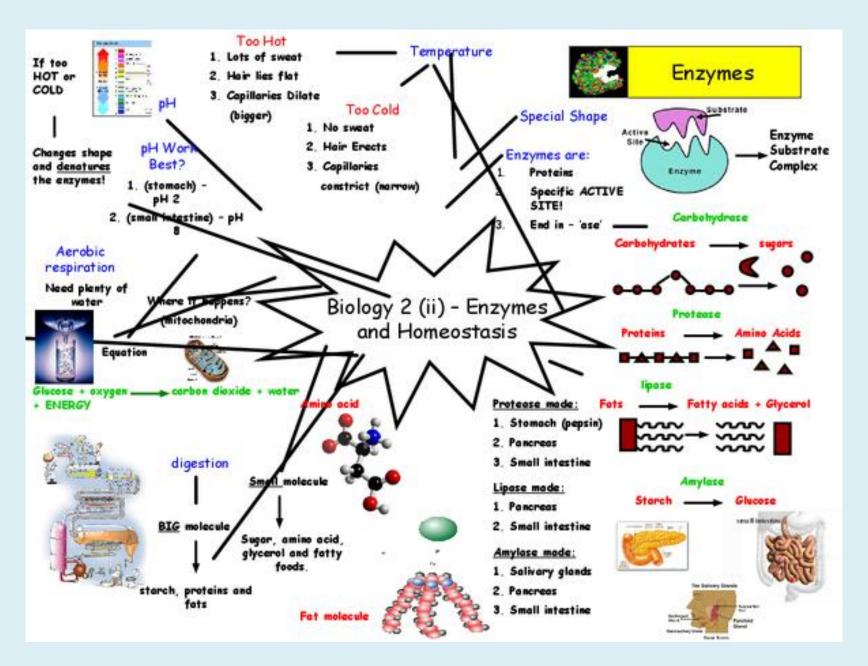
Once you have finished the mind map read it out loud at least 5 times to make it stick.

Try to make the information into a story by filling in details when you read it out loud – that will make it stick in your head.

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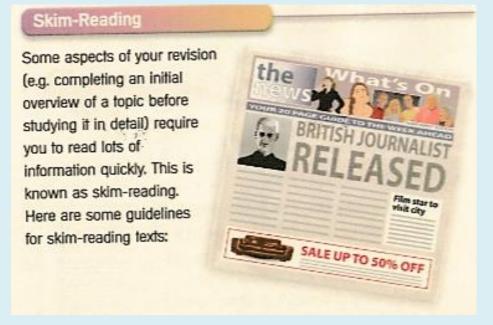




Read intelligently



Spend five minutes flipping through a book or your notes looking at headings and summaries. Then attempt to mind map what you have spotted and what you can remember.



Set time constraints – Limit the time you spend skim-reading. If you aim to revise a topic for an hour, set aside 5 minutes to skim-read it first.

Increase the pace at which you read.

Skip sections that are difficult to understand. Make a note to come back to these later on.

Jot down notes on rough paper. As you read through the text, underline subheadings and key words and jot down information you feel is important.

Summarise in your own words. Reinforce your knowledge and understanding of the text by writing a summary of it in your own words.

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Reading for Close Analysis

Having overviewed topics by applying skimreading techniques, you can use skills of close analysis to focus on the details. This approach to reading requires you to...



annotate texts using key words and symbols group information into categories or themes think about how to organise your notes.

Annotate texts using key words and symbols

As you read through class notes and books, underline key words. But, make sure you don't underline too many words - there are normally only two or three key words in a paragraph and sometimes none at all. Draw symbols in the margins to act as reminders of important information in each paragraph.

Group information into categories or themes

Group information under headings, for example, having read sections of your English notes and revision guides on 'advertising', you conclude that this topic covers issues and techniques relating to three main themes:

- The key features of adverts
- How to analyse adverts that promote products
- How to analyse adverts that encourage people to donate

Summary Shapes

Another option is to take notes inside or around the sections or parts of a summary shape. For example, imagine that the section of your Geography textbook on 'river processes' looks like the passage of text below:



ABRASION ATTRITION H. ACTION CORROSION

TRACTION
SALTATION
SUSPENSION
SOLUTION

VELOCITY BENDS LAKES SEAS

River Processes

Erosion – Processes of river erosion include: abrasion (e.g. sediments rubbing against the river bed and sides); attrition (e.g. rocks colliding and breaking into smaller pieces); hydraulic action (e.g. immense force of the water itself causes erosion); and corrosion (e.g. water reacts with or dissolves chemicals in certain rocks, which are then carried downstream in solution).

Transportation – Sediments can be transported along the river bed by traction (e.g. rocks are rolled and pushed along the river bed) and saltation (e.g. large sand grains are bounced along the river bed). In addition, smaller sediments can be carried in suspension (i.e. in water above the river bed) and some minerals are dissolved and carried as solution.

Deposition – Rivers deposit materials when their velocity is decreased to such an extent that they can no longer carry their entire load. This often occurs on the inside of bends or meanders and when they enter a lake or the sea.

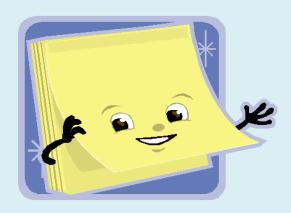
When taking revision notes on 'river processes', as illustrated on page 44, you could extract key words and write these in the margins. As there are twelve key processes to remember from this topic, you could then draw a big circle and divide this into twelve parts. Finally, as illustrated below, in each of these parts you could write key words to remind you of different river processes.



Remember that you can use different shapes. For example, if there had been three river processes then you could have written key words at the end of the three points of a triangle or if there had been four processes you could have drawn symbols inside the sections of a four-part square. If there had been five or six processes then you

Cue cards / Flash cards

Use cards. Write questions on one side and answers on the other. Then get someone to test you. Merely creating the cards will help you recall. You can also use them to test yourself when you have some spare time.



File cards

File cards bought in stationary shops are ideal for this. These can be carried around in a pocket or bag and can be used whenever you have a spare moment. Pay careful attention to:

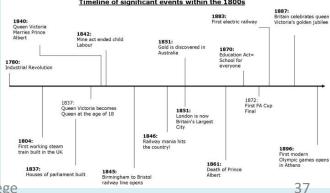
- Always write the subject in the top right hand corner of the card
- Always put a title on the card
- Number the cards
- Cards covering the same topic and/or subject should be kept together using an elastic band or treasury tag in the top left corner



Events Time Line

Copy out key dates for the topic you are revising on two separate pieces of paper and then add in notes from the important events for each item. Once this information has been collected write down just the dates on separate pieces of paper. These are arranged in chronological order on the floor and you then to step onto the first date on the floor and using your notes say out loud what

happened on that particular date.



More simple tips

Condense:

Fitting notes onto one side of paper makes them easier to stomach, so rewrite and cut down as you go.

Highlight:

Target key areas using colours and symbols. Visuals help you remember the facts.

Record:

Try putting important points, quotes and formulae on tape. If you hear them and read them, they're more likely to sink in.

Talk:

Read your notes out loud, it's one way of getting them to register.

Test:

See what you can remember without notes, but avoid testing yourself on subjects you know already. Why not ask someone else to test you?

Time:

Do past exam papers against the clock; it's an excellent way of getting up to speed and of checking where there are gaps in your knowledge.

The rules of revision

- 1. Make your own revision notes. You'll learn as you write and, once you've got them, you're halfway there.
- **2. Be brief**. Check the syllabus or ask a teacher to make sure you've got the key areas sussed.
- **3. Concentrating** on the plus points of revision helps keep you going. Start by thinking how much easier you'll find the exams.
- **4. Don't overdo it.** Your concentration lapses after a couple of hours, so take regular breaks.
- **5. Experiment with different revision techniques**. Variety beats boredom.
- **6. Focus.** Don't make pointless notes. Look at past exam papers and see how questions could be asked.
- **7. Get confident**. If you're positive about exams, you should take in more information and remember it when it counts.

Group Study

Effective revision is not only about studying alone, but also about making the most of social learning environments, such as classrooms.

Self Study and Group Study

Some aspects of revision (e.g. studying textbooks) are best completed alone in a quiet space where there are few distractions. This is known as **self study**.

Other aspects of revision (e.g. enhancing your existing knowledge of topics) are best suited to social environments where you can learn more interactively (e.g. by asking and answering questions). This is known as **group study**.



Revision Get-togethers

Organising out-of-school revision get-togethers will help you to build on the work that you complete in lessons, and to expand on progress that you make during selfstudy sessions at home.

Teaching Topics to Friends

One of the most effective ways to learn information is by teaching and explaining it to others.

- Create a summary arrive at the meeting with a single piece of paper that sums up everything you want to say
- Divide the topic up into sections study your class notes, textbooks and revision guides to identify the main sections
- Give examples of exam questions have a look through practice and past exam papers so that, towards the end of your presentation, you can give examples
- Provide opportunities for questions and answers encourage questions and make a note of questions that you found difficult to answer and ask your friends to correct you if you haven't explained something well
- Set up new email contact groups and use social-networking sites to exchange revision notes and exam questions with friends that cropped up in previous years

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

Note taking

Although there's no single note taking technique that suits every individual or every learning task, there are general principles that you can apply when taking notes.

Colour

Use colour to highlight, contrast and group information

Highlighting or underlining information in different colours according to its importance e.g. red for very important information

Using colours to distinguish between sections of a topic (e.g. orange for notes relating to one section and pink for another)

Key Words and Symbols

Create memorable notes by using key words to help you remember what each sentence stated. Your revision notes can also be enhanced by using symbols - rather than writing key words, you could draw a symbol to represent the key word.

Key Words	Sentences
1. PLC 2. Utd	There are two types of limited company: 1) public limited companies (PLC); and 2) private limited companies (Ltd).
TWO Shareholders	To <u>set-up</u> a public limited company or a private limited company, a minimum of <u>two shareholders</u> is needed.
a) Owners = Shareholders b) Managers = Directors	A limited company is <u>owned</u> by its <u>shareholders</u> , but <u>managed</u> by its <u>directors</u> .
Audited Accounts	The accounts of limited companies have to be audited – checked for accuracy and truthfulness – by external auditors.

Note-Taking Techniques

Experiment with different ways of summarising a passage of information. For example, the information about the life of Princess Diana in the table below could be summarised in...

0

a list

an eight-part shape

a map.

1/7/61	Born on 1st July 1961
← Parents 67 →	Parents separated in 1967
Althorp 75	Moved to her family's stately home (Althorp) in 1975
Married 81	Married Prince Charles in 1981
W82	Prince William was born in 1982
H84	Prince Harry was born in 1984
← chartes 92 →	Announced her separation from Prince Charles in 1992
R/P 97	Tragically died in a car crash in Paris in 1997

EXAMINATION TECHNIQUES



Answering exam questions

- 1. Scan all the questions.
- 2. Mark all the questions you could answer.
- 3. Read the questions carefully.
- 4. Choose the correct number of questions in each section.
- 5. Decide on an order: best answers first.
- 6. Divide up your time, allowing more time for the questions with the most marks.
- 7. Underline the key words in the question.
- 8. Plan your answer.
- 9. Stick to the point of the question.
- 10. Write your answer.
- 11. Use the plan at every stage e.g. every paragraph.
- 12. Check your answer against the plan. Look out for mistakes.
- 13. If you have time, re-read the questions and your answers and make any necessary corrections.



Understand what the examiner is asking you to do

- Explain the difference between
- Investigate closely
- Weigh up the strengths and weaknesses
- Demonstrate
- Prove / make certain
- Debate from different view points
- Support (with facts, figures, examples, references)
- Give a concise statement of meanings and identify the main characteristic
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What are command terms?

These are words in the question that tell you what to do. Here are some common ones and what they mean.

Outline	Give the key points but don't go into detail.
Describe	Give a detailed account of something.
Explain	Set out a detailed account that includes reasons and results; causes and effects.
Compare	Identify the similarities and differences between things in a balanced way.
Evaluate	Work out the value of something by weighing up its strengths and its limitations.

Command Words

To ensure you answer the question asked, practise identifying command words (e.g. 'describe', 'explain', 'compare', 'choose', 'list', 'why', 'how') in questions from exam papers. For example:

- What effect is this advert trying to have on people that read it?
- 2 How has the author used language to offer insights into the personality of the character introduced in this text?
- 3 Describe and explain what happens when bromine water is added to a solution of ascorbic acid.
- Explain why farmers put ammonium sulphate on fields and why this should not be done when heavy rain is forecast.
- What does Source A tell us about how people felt about being asked to fight at the beginning of the First World War?
- 6) How useful is the source in explaining why so many people initially believed that the First World War would be won within a few months?
- Describe the work done by the Sales and Marketing Department in this business.
- Suggest and explain three factors that the Directors might consider when deciding now to price this product.



Understand what the examiner is asking you to do

simplify

analyse

enumerate

Describe in detail

compare and contrast

justify

Sum up

criticise

explain

prove

evaluate

summarise

outline

interpret

calculate

Identify problems and disadvantages

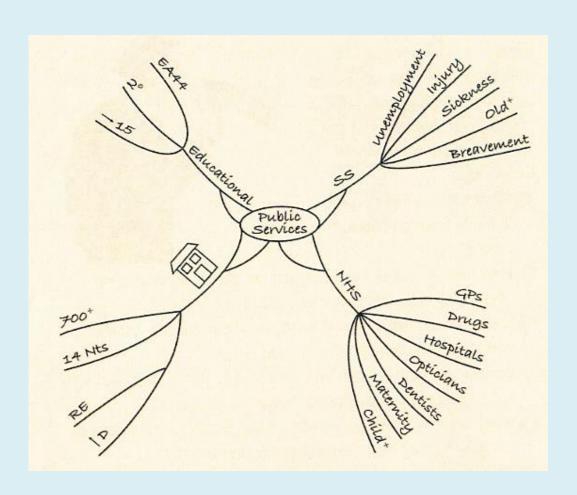
Show how

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Here are some other ways to get top marks for responses to longer-answer questions :

- Include at least one key point in each question
- Define any complex words that you use
- Back up your arguments with examples
- Write thorough answers, but don't waffle

Before responding to longer answer questions, jot down an outline of the structure and content of your answer. For example, if a question in your History exam asks you to 'Describe improvements that were made to British public services between 1945 and 1951', then you could plan your answer by quickly sketching out from memory a rough outline of the summary map to the right.



Making final checks

Always set aside 5 to 10 minutes towards the end of each exam to complete final checks. During this time:

- Check that you've answered each question. Even if you don't have time to write
 full answers, examiners may give you additional marks for last-minute responses.
 It's especially important to respond to all multiple choice questions, because you
 normally have a 15%-25% chance of guessing the right answer.
- Ensure that your responses actually answer the questions that you've been asked, and that they're as precise and thorough as possible.
- Remember that you can be marked up and down according to your spellings, punctuation, grammar and the overall fluency or impact of your writing style.
- Make sure that you've clearly outlined all of your workings when answering Maths and Science questions.
- If you finish early then don't just sit back and have a quick nap! Check through the whole exam paper to identify further improvements that you can make to your answers.

Stress Management

Stress-Busting techniques

When people suffer from stress their concentration is poor and they find it difficult to memorise and recall information. Long periods of stress will have a negative impact on the effectiveness of your revision and on your performance in the exam room.





Turn off the TV when you're revising and keep the volume of your music down low

Get plenty of rest and sleep

Take regular exercise

Don't keep things to yourself – talk about how you are feeling with friends, family or someone at school

Stress management

When people suffer from stress their concentration is poor and they find it difficult to memorise and recall information. Long periods of stress will have a negative impact on the effectiveness of your revision and on your performance in the exam room.

Revision Environments

Clearing and re-organising a room that you use as your primary out-of-school revision space (e.g. your bedroom) will help to put you in control of your revision, and will boost your self-confidence.

Health and Fitness

Because of the strong links between mind and body, one of the best ways to combat exam stress is by ensuring that you keep yourself physically fit and healthy. Eat a balanced diet, take regular exercise and get plenty of rest/sleep.

Social Support Networks

Stay connected – some of the best ways to reduce exam stress involve other people, so be sure to stay connected to your family, friends and teachers.

Revision Diary Entries

Completing regular entries in a revision diary provides you with the chance to review your progress and reflect on solutions to any difficulties you're facing. It also provides opportunities for you to complete and write up exercises that'll help you to pacify negative emotions and stay positive. Beck Catholic Sports College

Revising Maths

To prepare for Maths exams you need to learn how to correctly apply a variety of mathematical procedures and formulae when solving problems. This unit highlights ways of improving your problem-solving skills and shows you how to create Maths summary sheets.

Studying Percentages

Read through the annotated passage of text below about working out percentages.

% cent = 100ths

Calculating Percentages

Percent means 'number of <u>hundredths</u>'. So, the question, 'Calculate 8 percent of 400' is actually asking you to 'calculate 8 hundredths of 400'. To answer this question you could, therefore, calculate the value of <u>one hundredth</u> of $\underline{400}$ and multiply this value by 8 (i.e. $\underline{400} \div \underline{100} \times \underline{8} = 32$).

100

Expressed in another way, to calculate a percentage 'a' of a number 'b', you can use the equation $\frac{\mathbf{a} \times \mathbf{b}}{100}$.

↓↑%

Percentage Changes
When an original amount, 'b', is increased or decreased by a certain percentage, 'a', to calculate the new amount you could:

Option 1

Calculate the change: a x b / 100
 Add this to (for an increase) or subtract this from (for a decrease) the original amount 'b':

 $\mathbf{b} \pm (\frac{\mathbf{a} \times \mathbf{b}}{100})$

 $b \pm \frac{a \times b}{100}$

option 2

Another way of calculating the new amount is by multiplying the original amount 'b' by $1 \pm$ (plus for increases and minus for decreases) the percentage change 'a' divided by 100:

Multiplier $(1 \pm \frac{\alpha}{100})$

b x $(1 \pm \frac{a}{100})$ (The section of this equation in brackets is known as the multiplier).

IIIIIIai Gruunuwork

The annotated text on page 58 introduces a few key expressions that are used to calculate percentages and percentage changes. Study them carefully for a few minutes. Pay particular attention to the way that the collection of terms ('a', 'b', '100', etc.) making up each formula have been highlighted using different colours. Writing in the margins will help you to remember which formula to apply!

Having worked with Maths texts in this way, to deepen your understanding of topics, jot-down some initial insights on rough paper.

Percentages

The idea of a percentage as 'hundredths' reminds me that Mr Jacobs explained in our Maths lesson that the same number can be expressed as a percentage, fraction or decimal:

Percentages:	Fractions:	Decimals:
150%	150/100 (or 11/2!)	1.5
80%	80/100 (or 4/5!)	0.80
2.5%	25/100 (or 1/4!)	0.25

Need to remember that...

If multiplier <1 then change is a <u>decrease</u>
If multiplier >1 then change is an <u>increase</u>

...and that the formulae for calculating percentage 11 are really helpful for questions that involve VAT...

VAT = 17.5% \rightarrow So, if adding VAT, the multiplier will be 1.175.

Revising Science

To do well in Science exams you need to have a good knowledge and understanding of scientific principles and concepts. You also need to show that you can think and reason scientifically. This unit uses a Chemistry topic to highlight ways of making the most of your Science revision.

Studying Chemistry

Imagine that you took the following notes during a Chemistry lesson. Read through them and look at how they've been annotated.

Solubility

1! HCl, NH₃

2! CO₂

3! O₂

variables

↓ +Temperature
↑ +Pressure

Acids $CO_2 \rightarrow H_2CO_3$ Alkalis $NH_3 \rightarrow NH_4OH$

The Solubility of Different Gases

The only two gases that are <u>very soluble</u> in water are hydrogen chloride (<u>HCl</u>) and ammonia (<u>NH₃</u>). Carbon dioxide (<u>CO₂</u>) is less soluble than hydrogen chloride and ammonia but more soluble than oxygen ($\underline{O_2}$) – which is only slightly soluble in water.

variables that influence Levels of Solubility

The volume of a gas dissolved in water decreases with increasing temperature (°C) and increases with increasing pressure (p).

The pH of Solutions

Some gases dissolve in water to form <u>acids</u>. For example, carbon dioxide (CO_2) dissolves in water to form the weak acid carbonic acid (H_2CO_3) : $CO_2 + H_2O = H_2CO_3$.

Other gases dissolve in water to form <u>alkalis</u>. For example, ammonia dissolves in water to form the alkali ammonium hydroxide (NH₄OH):

Identifying Core Concepts

Before taking detailed revision notes, it's helpful to begin studying Science topics by trying to quickly identify and jot down in your own words some of the core concepts that you might need to understand:

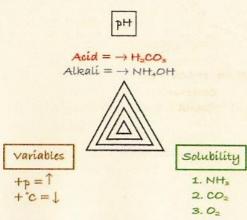
Solubility of Gases in Water: Core Concepts

- 1. First section COMPARES solubility of DIFFERENT gases.

 Gives EXAMPLES of gases that are very, quite, slightly soluble in water.
- 2. Second section shows how solubility in water of a SINGLE gas goes up and down according to temperature and pressure.
- 3. Third section highlights that the SOLUTIONS created vary in their pH. Gives EXAMPLES of acids and alkalis.

Creating a Summary Shape

You can then use key words and symbols from the annotated passage of text on page 62 to help create a summary shape that records key points from this topic:



Revising Modern Languages -

This unit highlights techniques that will help you to learn vocabulary, use different tenses and construct complex sentences when revising Modern Foreign Languages. Although all of the examples in this unit are French, you can use the same principles and skills to learn any language.

Language Themes

GCSE Modern Foreign Languages courses are typically organised into a collection of themes, such as:

Health

Holidays

Self and family

Leisure

In the town

The world at large

Work and future plans

Each of these themes has a set of vocabulary that you'll need to learn (e.g. words for different sports in 'Leisure' and words for different family members in 'Self and family'). It's also common for GCSE examiners to ask you to complete particular tasks related to each theme (e.g. as part of spoken exams, to talk about what you did during your holidays last year and what you plan to do during your holidays next year).

One way of organising your revision is to set aside time to focus on practising tasks and revising vocabulary related to each theme.

Remember that this will require you to practise using different tenses. You'll also need to learn not only how to translate from the target language into English (e.g. for listening and reading exams), but also how to translate from English into the target language (e.g. for spoken and written exams).

Learning Vocabulary

When learning vocabulary related to each of the themes in your syllabus, use tables to divide words into sub-sets. In the example below, French words related to the theme 'Self and family' have been arranged into six sub-sets and colours have been used to differentiate words according to gender (i.e. blue for masculine words and red for feminine words). Create similar tables in both French (or whatever language you're revising) and English so that you can test your vocabulary.



PARENTS	SIBLINGS	GRANDPARENTS
Les parents	Lejumeau	Les grands-parents
La mère	Lajumelle	La grand-mère
La maman	La sœur	La petite-fille
Le père	La demi-sceur	Le grand-père
Le рара	Le frère	Le petit-fils
	Le demi-frère	
EXTENDED FAMILY	IN-LAWS	MARITAL STATUS
Le cousin	Les beaux-parents	Le fiancé
La cousine	La belle-mère	La fiancée
La tante	La belle-sœur	La femme
La nièce	Le beau-père	L'epouse
L'oncle	Le beau-frère	Lemari
Le neveu		L'epoux

All the words in the table above are nouns. You can, of course, also create other tables for verbs, adjectives and adverbs.

Revising Geography

When revising Geography you need to develop a good knowledge and understanding of a wide range of physical, human and environmental forces, systems and processes. This unit helps you to study and revise Geography.

Obstacles to Development

The text below relates to the topic 'development' and outlines some of the obstacles faced by development projects that aim to improve the living standards of people in Less Economically Developed Countries (LEDCs). Have a look at how this has been structured and annotated.

- & Employment Income levels
- = J Taxes (3) Infrastructure
- @ P-Services

£?! Systems Water!! (2) Health Ed 10 Expectancies

14 Schooling Illiteracy Lskills @ PAL

Droughts! Floods! Humicanes! . Earthquakes! Economic - Employment and income levels are low so governments don't collect the taxes required to invest in infrastructure (e.g. roads, power stations) or public services (e.g. hospitals, schools).

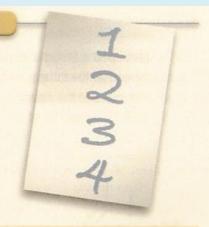
Health - Under-funded health systems (e.g. a lack of clinics, doctors and equipment), unclean water supplies and poor health education contribute to the low life expectancies in LEDCs.

Educational - Many people don't go to school, or leave school at a young age, which leads to high levels of illiteracy, few people developing the skills needed to work in higher paid jobs and, in general, an inadequate preparation for adult life.

Environmental - Many LEDCs are situated in areas of the world that are highly prone to environmental crises such as droughts, floods, hurricanes and earthquakes.

Identifying the Essentials

Having annotated the passage of text on page 70 you could begin to improve your knowledge and understanding of this topic by identifying single words or phrases that link to an essential issue or concept discussed in each paragraph.



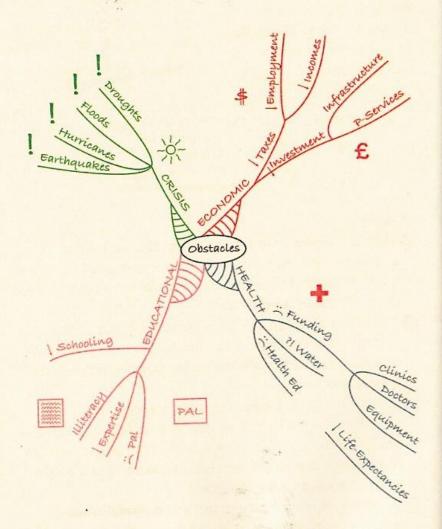
Paragraph	Essential Concept / Issue
1.	Tax Collection
2.	Life Expectancy
3.	Preparation for Adult Life
4.	Environmental Crisis

For example:

- The first paragraph identifies two causes (i.e. low levels of employment and low incomes) and two consequences (i.e. lack of investment in infrastructure and lack of investment in public services) of the inadequate taxes collected by governments in LEDCs.
- The second paragraph lists a number of factors (e.g. underfunding of health systems, a lack of clean water and poor health education) that contribute to the low life expectancies of people living in LEDCs.
- The third paragraph outlines two issues (i.e. some children not going to school at all and many other children leaving school at a young age) that contribute to two examples (i.e. illiteracy and lack of vocational expertise) of how LEDCs fail to offer young people sufficient preparation for adult life.
- The fourth paragraph highlights four environmental crises (i.e. droughts, floods, hurricanes and earthquakes) that are more

Focusing on the Details

Having developed a broad understanding of the structure of this topic, you can now use this to help create a summary for your revision file that records more of the details from the passage of text on page 70:



Questions and Answers

To review this topic you could organise a short 'questions and answers' session with a family member or a friend. During this review session they could ask you questions about information in the original passage of text and then they could add to, or correct, your responses. Your discussion might, for example, run something like this:



'OK then, what are some of the consequences of the fact that LEDCs' governments find it difficult to collect taxes?'

Well, this means that the governments don't have much money to invest in infrastructure such as roads or power stations, or in public services such as schools and hospitals'.





'Excellent! Tell me some specific things then about the consequences of under-funding of health systems in LEDCs.'

'They don't train enough doctors'.





Yeah. That's correct but you could also mention that there aren't enough clinics or medical equipment. What else influences the life expectancies of people living in LEDCS?

The lack of clean water.





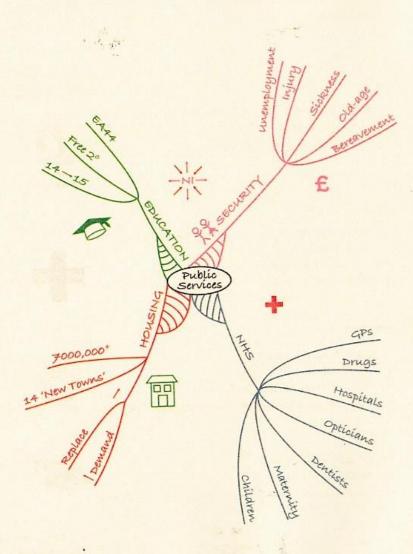
'Also poor health education. And what about the education system in LEDCs? What sorts of educational issues do LEDCs face?'

'The fact that some children don't go to school at all and loads of others only stay in school for a few years means that illiteracy rates are high, not many people develop the expertise needed to get higher paid 'professional' jobs and so, generally, young people aren't prepared fully for adult life'.

Option 2: Summary Maps

Another option would be to create a summary map:

. . .



Reviewing this Topic

To review this aspect of your History syllabus, you could write down a few key words or phrases from your revision notes and then use these to try to write about sections of this topic in your own words.

For example, let's say that you chose...

- Old age
- National Health Service
- Rising Demand
- Education Act 1944

...then you could write:



old Age

Soon after WWII the government used NI contributions to pay pensions to the elderly. People could also apply for benefits if they were unemployed, injured, sick or bereaved.

National Health Service

The creation of the NHS meant that for the first time everyone could benefit from FREE health services such as: appointments with doctors; hospitals; eye-care; dentistry; maternity and child welfare services.

Rising Demand

Rising demand for housing resulted from more marriages and higher birth rates. Alongside the need to replace houses destroyed during the war, this led to the construction of over 700,000 new houses and to the creation of 14 new towns.

Education Act 1944

The Education Act 1944 led to free secondary education for all and to the school leaving age changing from 14 to 15.

Archbishop Beck Catholic Sports College

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