

GCSE BIOLOGY

Y10 NEWSLETTER OCTOBER 2020

RIPLEY ST THOMAS
CHURCH OF ENGLAND ACADEMY



**Dear Parents/Guardians,
Welcome to October!**

It has been absolutely wonderful to welcome back Year 10 these past few weeks. We've been really impressed with their enthusiasm and dedication to getting on with this new normal. I wanted to outline how we are approaching this year for them. As ever, if you have any questions or concerns please get in touch via Parentline.

**Miss Montgomery
Subject Leader, Biology**

TOPICS UNTIL CHRISTMAS:

**Chapter 5: Health, Disease & Pathogens
Chapter 6: Preventing & Treating Disease
Chapter 7: Non-communicable Disease**

There will be a Ch5 & 6 Assessment in early-mid November. Your child will be informed of the specific date nearer the time.

10J1: Separate Biology
10J2,J3,T1,T2,T3: Combined Higher
10J4,J5,T4,T5: Combined Foundation

Attachments:

I have included checklists and key words for the current chapters your child will be studying. They have also been given these in class. These will be really useful for the end of chapter assessments. I have also included a general help sheet on revision.

FIREFLY:

If your child misses a lesson, they should log into Firefly and follow:
Science - Blended Learning

HOMEWORK:

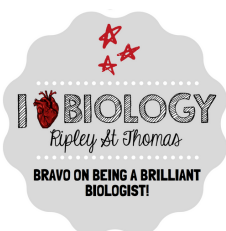
Your child will get set 2 homeworks a fortnight, 1 based on the current topic (an exam style question), and 1 based on a topic from lockdown (learning style - quiz/mind map etc).

USEFUL LINKS:

<https://ripley.fireflycloud.net/science/gcse-science/gcse-biology/> - (The Biology page)
<https://www.kerboodle.com/app> (Online Textbook access)
<https://quizlet.com/en-gb/> (Useful for revising key words)
<https://senecalearning.com/en-GB/> (Your child will have a class set up with revision Qs)

**"THE COMEBACK
IS ALWAYS
STRONGER THAN
THE SETBACK"**

Unknown



A student's guide to

EFFECTIVE REVISION



find what works for you!



Let's get started!

Leaving all your revision and cramming at the last minute is stressful and has limited success. The earlier you start revising, the more likely you are to effectively cover all the content and remember it



Create a suitable space

Find a quiet spot away from distractions such as the TV/your phone and keep your things all in one place, organized by subject!



Put a plan in place

Work out how much time you have and how long you can spend on each subject/topic- make sure all subjects get adequate time set aside!



Take regular breaks

It is possible to work too hard or for too long in one go! Your brain needs a rest to help it process information.

REVISION STRATEGIES:



Create your own revision resources using flashcards.

Method 1: Write a question on one side of the card and the answer on the back.

Method 3: Write the quote on one side, and your thoughts/themes on the back



Method 2: Write a key term or concept on one side, definition on the back

Method 4: Draw a diagram on one side, and the sequence and process on the back

You can colour code your flash cards into topics, case studies or subjects!



Dual Coding- putting a visual next to your written information!

Your images must be relevant to the information you have written. Therefore if you were to see the image without the text, it should trigger you to remember/recall the information



Quizlet is another online platform in which you can create your own flashcards but digitally. You can access hundreds of other quizzing resources for your chosen topic/subject created by other users too!



Seneca Learning website:

Seneca has been designed by cognitive scientists to help students remember topics better and reduce their stress levels. You can access revision notes on each of your topics and then take quick tests to check your learning.



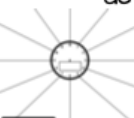
Switch the subject of conversation:

It's so easy to be distracted by friends or be tempted to put revision on the backburner for a quick chat so get the best of both worlds, quiz each other. Showcase all your knowledge to your friend, share ideas, you never know, they may have an idea or understanding about something, that you haven't!



Concept maps/mind maps:

A popular method is concept/mind mapping. Put a question or a topic in the center of the page and develop the idea into subtopics, including facts, chains of development, themes and/or quotes.



Revision clocks:

These sheets are available with a quick google. Broken into 12 sections this is a good way to break down a topic into small manageable chunks. You can even break it down into 5 minute chunks to see how much you remember!



Deliberate practice

Set time aside to practice what you will be doing in the exam - answering exam questions! Ask your teacher for questions!



Personal learning checklists:

Using the specification, create a list of topics you need to know and RAG your confidence. Ask your teacher first as they may have these already.

Revision guides/ knowledge organisers:

Use revision guides or knowledge organisers to help you focus in on what you need to learn. Use these in conjunction with another method mentioned.



Provide someone at home with a list of key terms or questions:

Provide someone at home with a list of key terms or questions that you want to master this week; every time they see you, they have to ask you one of these questions! It may even replace the usual conversation at the dinner table!

REVISION MISCONCEPTIONS:

There are many ways to revise, yet there are certain activities that make you feel like you are effectively revising, but in most cases, are just superficial!



Highlighting: More often than not we highlight text without actually thinking about why we are highlighting what we are highlighting. "To highlight everything, is to highlight nothing!"



Re-reading/summarising: Ensure that you are reading and making notes with an intended purpose, simply reading text is unlikely to provide you with information that will make its way into your long term memory!



TOP TIP: Colour code into themes to ensure your notes have a logical thinking process behind them

L.pellegrino

CH5: HEALTH & DISEASE

Chapter 5 Key Words List



Key word	Definition
Agar Gel	Widely used solid (gel) culture medium used for growing microorganism
Aphids	Insects that penetrate the plant phloem and feed on the dissolved food. They act as plant pathogens and are also vectors that carry pathogenic viruses, bacteria and fungi into healthy plant tissues
Bacteria	Single celled Prokaryotic organism
Binary Fission	Reproduction by simple cell division, for example in bacteria
Cellulose	The complex carbohydrate that makes up plant and algal cell walls and gives them strength
Chlorosis	The yellowing seen on the leaves of the plants when they cannot make chlorophyll due to lack of magnesium ions.
Communicable disease	Disease caused by pathogens that can be passed from one organism to another
Culture Medium	A liquid or gel used to support the growth of microorganisms or other cultures, often containing specific nutrients
Inoculate	Introducing microorganisms to a culture medium, or introducing modified organisms into an individual to protect them against disease.
Nitrates	Mineral ions needed by plants to form proteins
Pathogens	Microorganisms that cause disease
Vaccine	Dead or inactive pathogenic material used in vaccination to develop immunity to a disease in a healthy person.

Your chapter 5 test is on _____. Please ensure you revise. This can be done in lots of ways:

- Making mind maps
- Making flash cards
- Making revision notes
- Quizzing your parents/your parents quiz you.
- Doodle

You should bring evidence to the lesson on _____. Please ask your parents to sign if they have quizzed you.

You should know...	Revision notes	Revised	☺ ☹
The definition of health & the difference between communicable & non-communicable diseases.			
What a pathogen is, how it causes disease & how it can spread.			
How to grow bacteria & prevent the growth aseptically. REQ PRAC			
How to calculate bacterial growth.			
How to prevent infections: the work of Ignaz Semmelweis.			
What a virus is & 3 examples of viral diseases.			
How bacteria cause infection & 2 examples. How to treat bacterial infections.			
What a fungal disease is & know how Rose Black Spot affects a plant.			
What a protist disease is & how malaria is transmitted & prevented.			
How your body is protected from invading pathogens.			
<i>*Mineral deficiencies in plants & detecting this.</i>			

CH6: PREVENTING & TREATING DISEASE

Chapter 6 Key Words & Revision Checklist



Key word	Definition
Vaccine	Dead or inactivated form of a disease-causing microorganism.
Drug	A chemical substance used in the treatment of disease.
Preclinical testing	Laboratory testing using cells, tissues and live animals.
Clinical trial	Testing using healthy volunteers and patients.
Placebo	A substance that does not contain the drug being tested.
<i>Hybridoma</i>	<i>Cells which are a combination of cancer cell and human/mouse cell.</i>

Your chapter 6 test is on _____ Please ensure you revise. This can be done in lots of ways:

- Making mind maps
- Making flash cards
- Making revision notes
- Quizzing your parents/your parents quiz you.
- Doodle

You should know...	Revision notes	Revised	😊 ☹️
What a vaccine contains.			
The definition of antigens & antibodies.			
What a memory cell is.			
What happens in your body after a vaccine has been given.			
Which diseases the MMR vaccine works against.			
What herd immunity is.			
The difference between antibiotics & painkillers.			
Who Alexander Fleming was and what he discovered.			
What drugs are made from foxgloves & willow tree.			
The stages of a drug trial.			
What a placebo is & what a double-blind trial means.			
4 things a good medicine is...			
<i>* How monoclonal antibodies are made *</i>			
<i>* How monoclonal antibodies are used *</i>			
<i>* Advantages and disadvantages of monoclonal antibodies *</i>			

CH7: NON-COMMUNICABLE DISEASE

Chapter 7 Key Words List



Key word	Definition
carcinogen	A substance that can cause cancer
ionising radiation	Radiation from radioactive materials.
correlation	A link or relationship between two variables.
causal mechanism	How one factor influences another through a biological process e.g. cigarette smoke and lung cancer
tumour	An abnormal, uncontrolled group of cells.
benign tumour	Growths of abnormal cells contained in one place.
malignant tumour	Cells which can spread around the body invading healthy tissues, referred to as cancer.
cancer	A disease caused by a malignant tumour.
obese	Significantly overweight.

Your chapter 7 test/KPOW is on _____ Please ensure you revise. This can be done in lots of ways:

- Making mind maps
- Making flash cards
- Making revision notes
- Quizzing your parents/your parents quiz you.
- Doodle
- BBC Bitesize

You should know...	Revision notes	Revised	😊 ☹️
What a non-communicable disease means.			
What risk factors are.			
What a tumour is and the difference between benign and malignant.			
How smoking affects the risk of CV disease/lung disease/cancer/unborn baby.			
The effect of diet and exercise on the development of obesity/CV disease/diabetes.			
That alcohol affects brain and liver function/unborn babies/can act as a carcinogen.			