



Pre-Year 12 Biology Research and Presentation Summer Project

Title:- What connections are there between the recent spread of human infectious diseases and current loss of biodiversity?

The nature of your task is to research two ideas – how recent epidemics and pandemics have occurred, and how a sixth mass extinction of life is currently taking place. You then need to think about ways in which these two problems might be connected, and what solutions there may be. This is not to necessarily say that one causes the other, but that they may have factors and solutions in common. You should then prepare a powerpoint presentation of your findings and thoughts, to be delivered during the first weeks of your A-Level Biology course.

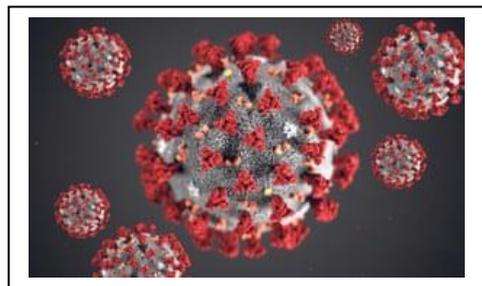
How to go about the task

1. Research the definitions of the terms epidemic, pandemic and biodiversity, and make brief notes. To help with this you can use online information sources, and also the New Head Start to A-level Biology (CGP A-Level Biology) available free from Amazon at the moment.

https://www.amazon.co.uk/Head-Start-level-Biology-Level-ebook/dp/B00VE2NIOI/ref=sr_1_1?dchild=1&keywords=cgp+head+start+to+a-level+biology&qid=1585478445&s=digital-text&sr=1-1

2. Research and make brief notes on a) how recent pandemics and epidemics, e.g. Covid 19, Ebola, AIDS and others have been able to spread to and through the human population and b) reasons why we are currently experiencing high levels of biodiversity loss which some scientists describe as the sixth mass extinction. Again, use internet sources for information, including the video links below:-

Spread of disease videos



<https://www.youtube.com/watch?v=NJLXdsO1GBI>

<https://www.youtube.com/watch?v=UG8YbNbdaco>

<https://www.youtube.com/watch?v=TPpoJGYIW54>

<https://www.youtube.com/watch?v=xjcsrU-ZmgY>

Mass extinction videos



<https://www.youtube.com/watch?v=z9gHuAwxwAs>

<https://www.youtube.com/watch?v=N2DP1I6CnXw>

<https://www.youtube.com/watch?v=07qyvX8WBco>

3. Research and think about how the two problems, of human disease transmission and loss of biodiversity, may have factors and solutions in common. Jot down and organise your information and thoughts.
4. Prepare a powerpoint presentation of your findings and ideas. It should be between 7 and 10 slides long. It should include the definitions, the nature of the two problems, how they are linked, and conclude with ideas for solutions to the problems, especially shared solutions. Make your presentation informative and interesting so your audience are continually engaged and get the gist, and to be a guide to help you what to say, i.e. don't just read it out! Video link below for guidance:-
<https://www.youtube.com/watch?v=9EDiyqP5UCU>
5. Have your presentation ready by September 1st. In the first A-Level Biology lesson you will be informed which teacher to email the presentation to, so you can deliver it in the following lessons.

Other ideas to gainfully occupy your time

Work your way through New Head Start to A-level Biology (CGP A-Level Biology) questions:-

https://www.amazon.co.uk/Head-Start-level-Biology-Level-ebook/dp/B00VE2NIOI/ref=sr_1_1?dchild=1&keywords=cgp+head+start+to+a-level+biology&qid=1585478445&s=digital-text&sr=1-1

Watch video clips of A-Level topics using the following link:-

https://www.youtube.com/channel/UCv8TzddkhvX_OC8U5SgU0yg/playlists?flow=grid&view=1&sort=lad

Medical/health books to read

Do No Harm by *Henry Marsh* (brain surgeon)

Get Up! by *James A Levine* (healthy lifestyle expert)

This is Going to Hurt by *Adam Kay* (junior doctor)

The Remarkable Life of the Skin by *Monty Lyman*

The Beautiful Cure by *Daniel M Davis* (immunologist)

Why we sleep by *Matthew Walker* (neuroscientist)

Bad Science by *Ben Goldacre* (former doctor)

10% Human by *Alanna Collen* (about the body's microbes)

Environment/genetics books to read

What Has Nature Ever Done For Us? by *Tony Juniper*

Wilding by *Isabella Tree* (not a joke name)

Creation or Evolution: Do We Have To Choose? By *Denis Alexander*

The Selfish Gene by *Richard Dawkins*

The Incredible Unlikeness of Being by *Alice Roberts* (how humans evolved)

Dead Zone by *Philip Lymbery* (species extinction)