

Year 12 Transition

Welcome to Nailsea Sixth Form



KS5 Subject:

Biology

Objectives for Transition Tasks:

- To start to develop expected 6th form study skills, including independence
- To culture an interest and passion for your chosen subject through enquiry
- To learn core concepts of the subject to use in your studies

Watch:

- Explained: The Next Global Pandemic (20 mins)
<https://www.netflix.com/watch/81062202?trackId=13752289&tctx=0%2C3%2C0d03e68c-6321-41f2-9dfa-11f336ddc8ca-52560540%2C%2C>
- The Life Scientific. Beneficial viruses <https://www.bbc.co.uk/programmes/m0009b2t>
- TEDx - Animations of unseeable biology
https://www.ted.com/talks/drew_berry_animations_of_unseeable_biology?language=en –
- TEDx - A look inside the brain in real time
https://www.ted.com/talks/christopher_decharms_a_look_inside_the_brain_in_real_time#t-179742
- In Our Time: Genetic Mutation <https://www.bbc.co.uk/programmes/b008drvm>
- Can Science Make Me Perfect? <https://www.bbc.co.uk/iplayer/episode/b0b6q3qy/can-science-make-me-perfect-with-alice-roberts>
- In Our Time: Neanderthals <https://www.bbc.co.uk/programmes/b00sq1nv>
- The Life Scientific: evolution of cancer <https://www.bbc.co.uk/programmes/m0003ks6>
- TEDx - How can we make crops survive without water?
https://www.ted.com/talks/jill_farrant_how_we_can_make_crops_survive_without_water#t-16976
- In Our Time: Discovery of Oxygen <https://www.bbc.co.uk/programmes/b0088nql>
- In Our Time: The Heart <https://www.bbc.co.uk/programmes/p003c1bh>
- Inspiring women into STEM <https://soundcloud.com/edexcelscience/7-inspiring-girls-to-follow-a-stem-based-pathway-with-katie-king>



Read:

Book recommendations:

- The immortal life of Henrietta Lacks by Rebecca Skloot. Examines the ethics of research and consent.
- Frankenstein's Cat by Emily Anthes. Discover how glow in the dark fish are made and more great biotechnology breakthroughs.
- Selfish Gene by Richard Dawkins Examines altruism and DNA

Articles:

- Can viruses save lives? <https://www.sciencejournalforkids.org/articles/can-viruses-save-lives/>
- Why do some clownfish not breed? <https://www.sciencejournalforkids.org/articles/why-do-some-clownfish-not-breed/>

Independent Task (to be submitted):

Make a summary poster which includes the following information:

- Eukaryotic vs prokaryotic cells
- What is a cell surface membrane and what is it made of?
- how substances can move across a cell membrane
- Proteins – including enzymes and protein synthesis
- Structure and function of the heart and lungs.
- Add information from at least one resource you have read and one resource you have watched

- What can ancient DNA tell us about stone age people?

<https://www.sciencejournalforkids.org/articles/what-can-ancient-dna-tell-us-about-stone-age-people/>

- What happens to our immune cells as we get older?

<https://www.sciencejournalforkids.org/articles/what-happens-to-our-immune-cells-as-we-get-older/>

- How do bacteria in the gut control the brain? <https://www.sciencejournalforkids.org/articles/how-do-bacteria-in-the-gut-control-the-brain/>



Aim Higher Task:

- Research and add onto your poster how different organisms breathe. Think fish, insects etc.

- Research what endosymbiosis is. Add this onto your poster. Think about where on your poster you could put it.

- Explain why endosymbiosis is so important to the start of life.

- Watch this video and summarise -

https://www.youtube.com/watch?v=nWuV6PVKv1A&ab_channel=EveryCellAUiverse



DEADLINE FOR TRANSITION TASK: Please bring to your first lesson in September.