

# BIOLOGY

As a prospective student within Biology, you should do some preparatory work before term starts in September. The purpose of this is to start to make you aware of the step in detail required in A'Level Biology compared to GCSE.

You need to bring this work to your first lesson in September.

1. You should produce 3 large posters of a Eukaryotic animal cell, a Eukaryotic plant cell and a Prokaryotic bacteria cell. Ensuring you include the organelles and what their role is within the cell.
2. Secondly you need to produce two tables of comparison, one between plant and animal cells and the second between Eukaryotic and Prokaryotic cells.
3. Watch two of the films or presentations and write a short review.

The information you require is easily available on the internet and library books.

We will provide you with a textbook for use in lessons and there will be the opportunity to purchase a revision guide at a much-reduced rate.

I look forward to meeting you in September. Have a good holiday and if you need to contact me please use the email address below.

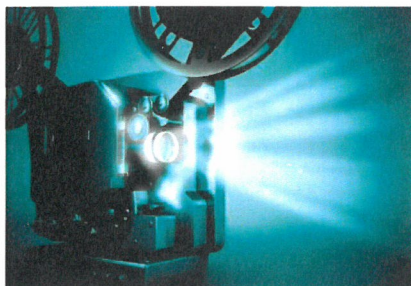
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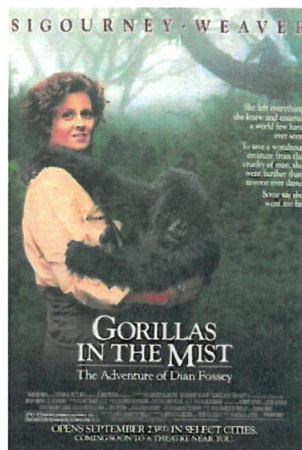
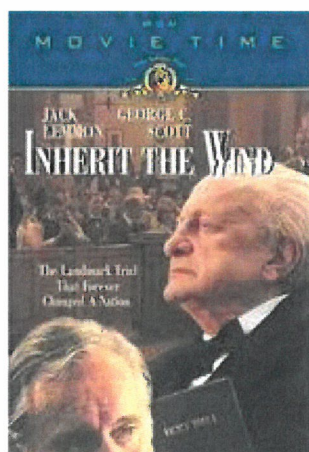
## Movie Recommendations

Everyone loves a good story and everyone loves some great science. Here are some of the picks of the best films based on real life scientists and discoveries. You won't find Jurassic Park on this list, we've looked back over the last 50 years to give you our top 5 films you might not have seen before. Great watching for a rainy day.



### Inherit The Wind (1960)

Great if you can find it. Based on a real life trial of a teacher accused of the crime of teaching Darwinian evolution in school in America. Does the debate rumble on today?

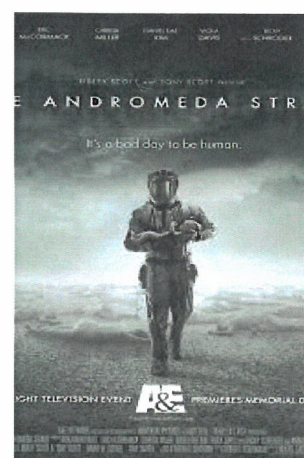


### Gorillas in the Mist (1988)

An absolute classic that retells the true story of the life and work of Dian Fossey and her work studying and protecting mountain gorillas from poachers and habitat loss. A tear jerker.

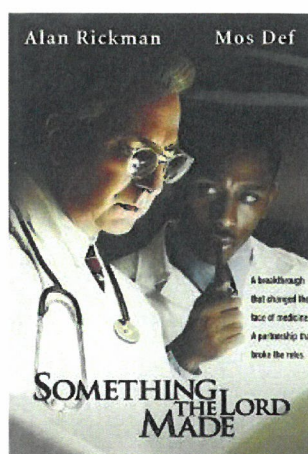
### Andromeda Strain (1971)

Science fiction by the great thriller writer Michael Crichton (most famous for writing Jurassic Park). Humans begin dying when an alien microbe arrives on Earth.



### Lorenzo's Oil (1992)

Based on a true story. A young child suffers from an autoimmune disease. The parents research and challenge doctors to develop a new cure for his disease.



### Something the Lord Made (2004)

Professor Snape (the late great Alan Rickman) in a very different role. The film tells the story of the scientists at the cutting edge of early heart surgery as well as issues surrounding racism at the time.

There are some great TV series and box sets available too, you might want to check out: Blue Planet, Planet Earth I and II, Icarus, Blackfish, The Ascent of Man, Catastrophe, Frozen Planet, Life Story, The Hunt and Monsoon.



## Movie Recommendations

If you have 30 minutes to spare, here are some great presentations (and free!) from world leading scientists and researchers on a variety of topics. They provide some interesting answers and ask some thought-provoking questions. Use the link or scan the QR code to view:

### A New Superweapon in the Fight Against Cancer

Available at :

[http://www.ted.com/talks/paula\\_hammond\\_a\\_new\\_superweapon\\_in\\_the\\_fight\\_against\\_cancer?language=en](http://www.ted.com/talks/paula_hammond_a_new_superweapon_in_the_fight_against_cancer?language=en)

Cancer is a very clever, adaptable disease. To defeat it, says medical researcher and educator Paula Hammond, we need a new and powerful mode of attack.



### Why Bees are Disappearing

Available at :

[http://www.ted.com/talks/marla\\_spivak\\_why\\_bees\\_are\\_disappearing?language=en](http://www.ted.com/talks/marla_spivak_why_bees_are_disappearing?language=en)

Honeybees have thrived for 50 million years, each colony 40 to 50,000 individuals coordinated in amazing harmony. So why, seven years ago, did colonies start dying en-masse?

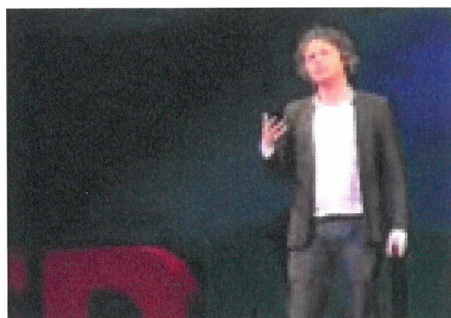


### What Doctors Don't Know About the Drugs They Prescribe

Available at :

[http://www.ted.com/talks/ben\\_goldacre\\_what\\_doctors\\_don\\_t\\_know\\_about\\_the\\_drugs\\_they\\_prescribe?language=en](http://www.ted.com/talks/ben_goldacre_what_doctors_don_t_know_about_the_drugs_they_prescribe?language=en)

When a new drug gets tested, the results of the trials should be published for the rest of the medical world — except much of the time, negative or inconclusive findings go unreported, leaving doctors and researchers in the dark.



### Growing New Organs

Available at :

[http://www.ted.com/talks/anthony\\_atalla\\_growing\\_organs\\_engineering\\_tissue?language=en](http://www.ted.com/talks/anthony_atalla_growing_organs_engineering_tissue?language=en)

Anthony Atalla's state-of-the-art lab grows human organs — from muscles to blood vessels to bladders, and more.