Biology Syllabus resource links

This supporting document is provided to assist you in starting your research and collating resources, including articles and websites, in preparing programs, units of work and lesson plans. They are only provided as a suggestion.

Although this document may contain links to third party websites and resources, the NSW Department of Education is not responsible for the condition or content of these sites or resources as they are not under the control of the Department.

## Cell requirements relating to light energy and chemical energy

* sciencing.com - [Storing energy during photosynthesis](http://sciencing.com/do-store-energy-during-photosynthesis-6498680.html)
* asknature.org - [Converting solar energy into chemical energy](https://asknature.org/strategy/photosynthesis-converts-solar-energy-into-chemical-energy/#.WS5Qy-uGNQI)
* nature.com/scitable - [Cell energy and cell functions](https://www.nature.com/scitable/topicpage/cell-energy-and-cell-functions-14024533)
* ABC Education - [How do cells get energy and what is photosynthesis?](https://education.abc.net.au/home#!/media/85184/) (duration 2:10)

## Investigating extinction events

* coursera.org Origins - Formation of the Universe, Solar System, Earth and Life
  + [Mass Extinction Events and Their Causes Part 2 - Bent Lindow](https://www.coursera.org/learn/origins-universe-solarsystem/lecture/B7YC3/9-6-mass-extinction-events-and-their-causes-part-2-bent-lindow) (duration 17:55)
  + [9.8 Mass Extinction Events and Their Causes: The Cretaceous-Tertiary Mass Extinction Part 4 - Bent Lindow](https://www.coursera.org/learn/origins-universe-solarsystem/lecture/g61nc/9-8-mass-extinction-events-and-their-causes-the-cretaceous-tertiary-mass) (duration 15:08)
* manoa.hawaii.edu/exploringourfluidearth - [Further Investigations: Change Over Time](https://manoa.hawaii.edu/exploringourfluidearth/physical/ocean-floor/change-over-time/further-investigations-change-over-time)
* nytimes.com/section - [Will it happen again? Examining mass extinctions on earth](https://learning.blogs.nytimes.com/2011/04/06/will-it-happen-again-examining-mass-extinctions-on-earth/comment-page-1/?_r=0)
* [Extinct Australian animals over time](http://www.scootle.edu.au/ec/viewing/R10704/index.html) – Scootle
* worldatlas.com - [Timeline Of Mass Extinction Events On Earth](http://www.worldatlas.com/articles/the-timeline-of-the-mass-extinction-events-on-earth.html)
* Planet Doc Full documentaries - [Sixth Mass Extinction (Full Documentary)](https://www.youtube.com/watch?v=EDQV1hiLpQQ) (duration 50:17)
* Habitabilitylab - [Major Life Extinctions Events](https://www.youtube.com/watch?v=NuDVBWj0E-s) (duration 1:10)

## Aboriginal and Torres Strait Islander Peoples, paleontological and geological evidence of past changes in ecosystems

* NSW Department of Primary Industries - [Geologic 2. NSW karst environments – the treasure chest of time](http://www.environment.nsw.gov.au/resources/geodiversity/08141Geologic2.pdf)
* eh-resources.org - [Reconstructing past climates](https://www.eh-resources.org/reconstructing-past-climates/)
* [Aboriginal](https://www.scootle.edu.au/ec/search?q=aboriginal+rock+paintings&field=title&field=text.all&field=topic&v=text) Rock Paintings

It is strongly suggested and advised to contact your local [AECG](https://education.nsw.gov.au/teaching-and-learning/aec/aboriginal-education-consultative-group-partnership-agreement) for local Aboriginal and Torres Strait Islander knowledge and information.

## Single Nucleotide Polymorphism

* ghr.nlm.nih.gov - [What are single nucleotide polymorphisms (SNPs)?](https://ghr.nlm.nih.gov/primer/genomicresearch/snp)
* [SNPs - Single Nucleotide Polymorphism (Better Explained)](https://www.youtube.com/watch?v=x4m1_P5Ljf8) (duration 1:13)
* [Single nucleotide polymorphism SNP](https://www.youtube.com/watch?v=DE9b1dxy_pE) (duration 5:11)
* learn.genetics.utah.edu - [Making SNPs Make Sense](http://learn.genetics.utah.edu/content/precision/snips/)
* Define [polymorphism](https://www.genome.gov/genetics-glossary/Polymorphismhttps:/www.genome.gov/genetics-glossary/Polymorphism)
* Define [SNP](https://www.genome.gov/genetics-glossary/Single-Nucleotide-Polymorphisms)

## Gene flow and genetic drift

* shmoop.com - [Gene Flow and Genetic Drift](http://www.shmoop.com/mechanisms-evolution/gene-flow-drift.html)
* [Gene Flow & Genetic Drift in Evolution](https://www.youtube.com/watch?v=ALS7UO6F1Zs) (duration 9:17)
* differencebetween.com - [Difference Between Genetic Drift and Gene Flow](http://www.differencebetween.com/difference-between-genetic-drift-and-vs-gene-flow/)
* Bozeman science – [Genetic drift](https://www.youtube.com/watch?v=mjQ_yN5znyk) (duration 11:28)
* [Genetic Drift, Gene Flow, and Types of Natural Selection](https://www.youtube.com/watch?v=Fc2KAOqKV_E) (duration 4:03)

## Disease as a disruption of homeostasis

* ck12.org/student - [Disruption of Homeostasis - Advanced](https://www.ck12.org/biology/Disruption-of-Homeostasis/lesson/Disruption-of-Homeostasis-Advanced-BIO-ADV/)
* Khan Academy - [Homeostasis](https://www.khanacademy.org/science/biology/principles-of-physiology/body-structure-and-homeostasis/a/homeostasis)
* Bozeman science - [Homeostatic Disruptions](https://www.youtube.com/watch?v=zrme9a_GMD8) (duration 8:05)

## Pharmaceuticals and the control of infectious diseases

* NSW Health - [Infectious diseases](http://www.health.nsw.gov.au/Infectious/Pages/default.aspx)
* [Cause](http://www.scootle.edu.au/ec/viewing/R11091/index.html) and spread of infection - Scootle

## Aboriginal and Torres Strait Islander Peoples’ protocols for medicines

* [racgp.org.au](https://www.racgp.org.au/the-racgp/faculties/atsi/guides) - [An introduction to Aboriginal and Torres Strait Islander health cultural protocols and perspectives](http://www.racgp.org.au/download/Documents/AHU/2012culturalprotocols.pdf) outlines appropriate and respectful engagement with and teaching of Aboriginal and Torres Strait Islander intellectual and cultural property.

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