### MOSSMAN STATE HIGH SCHOOL
Semester 2, 2017 – Course Outline Year 10 Biological Science Prep
BSP102A  Mr Jacks

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| Unit 5 Life Blueprints        | 1. describing the role of DNA as the blueprint for controlling the characteristics of organisms  
2. using models and diagrams to represent the relationship between DNA, genes and chromosomes  
3. recognising that genetic information passed on to offspring is from both parents by meiosis and fertilisation  
4. representing patterns of inheritance of a simple dominant/recessive characteristic through generations of a family  
5. predicting simple ratios of offspring genotypes and phenotypes in crosses involving dominant/recessive gene pairs or in genes that are sex-linked describing mutations as changes in DNA or chromosomes and outlining the factors that contribute to causing mutations                                                                                                           | 7 Weeks         | Average of Three Online Tests. (EXAM)                         | Wk 8 Wed 30th Aug |
| Unit 6 Life Evolves (Evolution)| 1. outlining processes involved in natural selection including variation, isolation and selection  
2. describing biodiversity as a function of evolution  
3. investigating changes caused by natural selection in a particular population as a result of a specified selection pressure such as artificial selection in breeding for desired characteristics  
4. relating genetic characteristics to survival and reproductive rates  
5. evaluating and interpreting evidence for evolution, including the fossil record, chemical and anatomical similarities, and geographical distribution of species                                                                                                                                                                                      | 6 Weeks         | ASSIGNMENT PART A: in-class investigation and individual written report | Wk 2 Wed 11th Oct |
|                                | PART B: Online Test (EXAM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3 Weeks         | Online Test (EXAM)                                | Wk 8 Wed 22nd Nov |

Students explore:
- What is evolution by natural selection?  
- What does the human family tree look like?  
- How have humans evolved over the past 6 million years?  
- What might humans look like 100,000 years from now?

The unit also contains instructions for a structured debate on whether or not humans are still evolving and a career profile on evolutionary biologist Jeremy Austin.

### Literacy Components
- Speaking and Listening:
  - Reading & Viewing: Reading text and other resources
  - Viewing resources relevant to balance within ecosystems
  - Writing & Designing: Writing an analytical report about chosen extended experimental investigation

### Numeracy Components
- Number: Using table and graphs to display trends and interrelationships
- Algebra
- Measurement: Gathering quantitative data
- Space
- Chance & Data: Analysing data

### ICT/Technology Components
- Select and use ICTs in the processes of inquiry and research: using the internet and online libraries to research
- Select and use ICTs to create a range of responses to suit the purpose and audience: using appropriate software to create a report
- Select and use ICTs to collaborate and enhance communication for an identified purpose and audience: Creating a clear and well-presented EEI Report
- Develop and apply ethical, safe and responsible practices when working with ICTs: selecting reliable and valid sources and using appropriately
- Use a range of advanced ICT functions and applications