Bellerive FCJ Catholic College

KS3 Scheme of Learning Reviewed 2020 AMB – 9B Genetics and Evolution

KS3 Unit Overview – Big Picture

Subject/Year group/Unit Title	Big picture questions	Pupils will focus particularly on the following statements from the programme of study:
9B - Genetics and Evolution **Lesson 1 Differences between species** **Lesson 2 Differences between species** **Lesson 3 Measuring variation in Humans** **Lesson 4 Causes of variation** **Lesson 5 Causes of variation** **Lesson 6 DNA** **Lesson 7 Importance of variation** **Lesson 8 Importance of variation** **Lesson 9 Biodiversity**	**9 Genetic information is passed down from one generation of organisms to another.** **10 The diversity of organisms, living and extinct, is the results of evolution.** **12 Scientific explanations, theories and models are those that best fit the facts known at a particular time.** **14 Applications of science often have ethical, social, economic and political implications.**	**BGI3: differences between species** **BGI4: the variation between individuals within a species being continuous or discontinuous, to include measurement and graphical representation of variation** **BGI2: a simple model of chromosomes, genes and DNA in heredity, including the part played by Watson, Crick, Wilkins and Franklin in the development of the DNA model** **BGI1: heredity as the process by which genetic information is transmitted from one generation to the next** **BGI5: the variation between species and between individuals of the same species leading to competition which can drive natural selection** **BGI6: changes in the environment that leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction** **BGI7: The importance of maintaining biodiversity and the use of gene banks to preserve hereditary material.**
Assessment tasks	**As FCJ educators, we will focus on the FCJ values by:**	**We will ensure students skills in reading, writing, communication and mathematics are enhanced by:**

End of Unit test. **Extended writing tasks on DNA, Mendel, Darwin.** **Routine homework tasks.**	Companionship – working and listening to others. Dignity – views of others respected. Excellence – progression from KS2 and towards Secure and Extending levels. Faith – consideration of variety of life on the Earth and respect for it.	**Student reading of texts.** **Questioning of pupils.** **Comprehension exercises, ensuring full sentences are used.** **Spellings corrected by staff and acted on by pupils.** **Data analysis, use of tables, tally charts, bar charts.** **Use of % and ratio in genetic crosses.**
We are supporting progression from KS2 in this unit by:	**We are supporting progression to KS4 in this unit by:**	**Misconceptions and how they will be addressed**
Review of classification. Review of causes of variation.	Studying DNA and variation. Introduction to evolution. Mendelian genetics.	Marking by teachers. Pupils self- marking (use of green pens). Peer assessment. Verbal corrections in Q&A sessions. EBI time.