Year 11: ASK Yourself!

Subject: Biology
Unit: 6 - Genetics

	Launching 1-2	Developing 3-4	Progressing 5-6	Mastering 7-9
Skills				
	I can create a model that represents the structure of DNA. I can convert fractions into percentages when linked to genetic diagrams.	I can complete Punnett squares to show the inheritance of characteristics controlled by single genes. I understand and can use probability when predicting the outcomes of genetic crosses.	I can construct Punnett squares to predict the outcomes of genetic crosses. I can successfully extract DNA from plant material when following instructions.	I can make judgements about embryo screening.
Knowledge				
	I can recall the definition of the Genome. I can recall that the entire human genome has been mapped. I can describe the structure of DNA as repeating units called nucleotides arranged in a double helix. I can identify organism that reproduce by sexual/asexual reproduction.	I can describe the structure of nucleotides as a sugar molecule, phosphate groups and bases. I can describe how a gene controls the order of amino acids in a protein. I can describe the inheritance of polydactyly and cystic fibrosis. I can recall that genes exist in different forms called alleles, and know key genetic terms.	I can describe and outline how a protein is synthesised. I can explain the need for meiosis in producing gametes. I can describe how mutations can, on rare occasions, affect how an organism functions. I can describe the structure of DNA as repeating units called nucleotides arranged in a double helix. I can explain that strands of DNA are complimentary.	I can explain that protein folds into a unique shape that helps it to function. I can explain how mutations can affect protein synthesis and structure. I understand that genes work by coding for the production of a particular protein, and non-coding genes switch genes on and off.