

Learning Area:	Science -Biology
Extension Certificate Title:	What is the Human Genome Project and what are it's Impacts on Society?
Task Details:	<p>(Please include your name and year level on the document you submit to your teacher. No group work is accepted.)</p> <ol style="list-style-type: none"> 1. Research the Human Genome Project from a variety of sources. You should begin with the two websites in resources section (see below) 2. In the introduction section of your poster include the following: relevant background information summarising the aims of the Genome Project and include a brief summary of your key findings. 3. Create a glossary of key words and insert into your poster 4. Using your research, answer the following three questions in the allocated sections of the poster: <p><u>Question 1:</u> What does the sequencing of the human genome mean to you, your family, society, and eventually your descendants?</p> <p><u>Question 2:</u> If DNA passports are introduced who should be able to access this personal data? Is this type of passport a good idea? Why or Why not?</p> <p><u>Question 3:</u> What do you think about personalised disease management?</p> <ol style="list-style-type: none"> 5. Find and label 1 relevant image 6. Find data relevant to your research and discuss this 7. Watch the film Gattaca. Once you have watched the film, select one of the following questions and discuss: <p>Option 1: During a gala party scene in GATTACA, a woman submits a saliva sample from a recent kiss to screen her potential boyfriend/husband's DNA. Is she violating his rights by doing this without his knowledge? Is this in anyway similar to performing a background check? How much would a DNA screen reveal about someone's personality and intelligence?</p> <p>Option 2: During a scene in Gattaca, Vincent's parents visited a doctor who specialized in child conception to select for the best traits for his future brother. They hoped that his brother would have the best possible chances for a successful life. Some of the traits mentioned in GATTACA included intelligence, height and any possibility of inheritable diseases. What ethical implications arise throughout the movie as a result of this? If you decide to have a child one day and are given the opportunity to select for special traits, would you do so? Why or why not?</p> <ol style="list-style-type: none"> 8. Include a reference list and insert into your poster <p>Helpful hint and possible inclusions in your introduction: What is in the genome, what does it do, and how does it differ between individuals? How do genes work in the body and how do they go wrong in disease? How is an understanding of human genes being used to improve the diagnosis of disease, develop new therapies and improve healthcare? Genetics has become an integral part of our society. It forms part of our history, raises difficult questions for individuals and for regulators, and leads to vigorous debate will this get more difficult if DNA passports are introduced or personalised disease management becomes widely available.</p>
Victorian Curriculum	Advances in scientific understanding often rely on developments in technology and technological advances are often linked to scientific discoveries (<u>VCSSU115</u>)

Content Descriptors:	<p>The transmission of heritable characteristics from one generation to the next involves DNA and genes (<u>VCSSU119</u>)</p> <p>Advances in scientific understanding often rely on developments in technology and technological advances are often linked to scientific discoveries (<u>VCSSU115</u>)</p> <p>Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations (<u>VCSIS140</u>)</p>
Resources Required:	<p>Please start your research with the following websites:</p> <ul style="list-style-type: none"> - The Wellcome Trust Sanger Institute http://www.sanger.ac.uk/ for information on the human genome sequencing project; - Celera http://www.celera.com/ for information on personalised disease management.

Assessment Criteria Rubric

(Please note this is an 80% pass rate. If you would like to resubmit you have 7 days to do so)

	5	3	1	Not Shown
Relevant background information summarising the aims of the genome research project.	Accurate and detailed identification and explanation of relevant background concepts. Relevant aims of the genome research project discussed.	Accurate identification and some explanation of relevant background concepts. Aim of the genome research project identified.	Clear identification and mostly accurate discussion of relevant background concepts. Aim mentioned but not correct.	Relevant background concepts not discussed. Aim not mentioned.
Question 1	Accurate and detailed analysis of how sequencing of the human genome relates to you, your family, society, and eventually your descendants.	Accurate analysis of how sequencing of the human genome relates to you, your family, society, and eventually your descendants.	A mention of how sequencing of the human genome relates to you and your family.	Question not answered
Question 2	Detailed understanding of DNA passports ethical implications and address in detail. Argument supported by strong evidence.	Understanding of DNA passports ethical implications and address in detail. Argument supported by evidence.	Some DNA passports ethical implications are stated. Argument supported by minimal/no evidence.	Question not answered sufficiently
Question 3	Strong discussion surrounding personalised disease management. Argument supported by strong evidence.	Discussion surrounding personalised disease management. Argument supported by evidence.	Some discussion surrounding personalised disease management. Argument supported by little/no evidence.	Question not answered sufficiently

Question 4	Strong ethical considerations discussed, and good detail provided.	Ethical considerations discussed and good detail provided.	Some ethical considerations discussed, and some detail provided.	Question not answered sufficiently	
Scientific vocab and relevant imagery, tables, graphs are labelled correctly.	Accurate scientific vocabulary and relevant imagery, tables, graphs are labelled correctly.	Some scientific vocabulary used and relevant imagery, tables, graphs are labelled correctly.	Little to no scientific vocabulary used and imagery, tables, graphs are inaccurate or not present	Scientific vocabulary and imagery, tables, graphs are not shown	

Once this task has been submitted, your subject teacher will do an initial assessment and moderate with a Learning & Teaching Leader to ensure a fair and equitable result. The subject teacher will communicate your result to you and if you receive an 80% or above you will be awarded your Extension Certificate. If you do not reach the 80% pass rate you will have 7 days to resubmit to achieve the 80% pass rate.