

JOHN EDMONDSON HIGH SCHOOL Assessment Notification

Assessment Task: Model Building and Report Assessment Weighting: 20% Due: Term 4 Week 8 Date: 27/11/2023 Task Type: Hand in Task ☐ In Class Task ☐ Practical Task ☐ 0utcomes assessed (NESA) B011/12-4 selects and processes appropriate qualitative and quantitative data and information using a range of appoptine media B011/12-4 solves scientific problems using primary and secondary data, critical thinking skills and scientific processes B10147-2 contrumuncates scientific understanding using suitable language and terminology for a specific audience or pupped B011/12-5 conducts investigations to collect valid and reliable primary and secondary data and information. B011/12-5 conducts investigations to collect valid and reliable primary and secondary data and information. B011/12-5 conducts investigations to collect valid and reliable primary and secondary data and information. B011/12-5 conducts investigations to collect valid and reliable primary and secondary data and information. B011/12-5 conducts investigations to collect valid and reliable primary and secondary data and information. B021/12-5 conducts investigations to collect valid and compare the forms in which DNA exists in eukaryotes and prokaryotes (CSBU076) • construct appropriate representations to model and compare the forms in which DNA exists in eukaryotes and prokaryotes (CSBU076) • analysing the function and importance of polypeptide synthesis (ACSBL079) • analysing the function and importance of polypeptide synthesis (ACSBL081)	Faculty: Science Course: Biology Year: 12				
Task Type: Hand in Task I In Class Task I Practical Task Outcomes assessed (NESA) BIO 11/12-4 selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media BIO 11/12-5 solves scientific problems using primary and secondary data, critical thinking skills and scientific processes BIO14-12 communicates scientific understanding using suitable language and terminology for a specific audience or purpose BIO12-12 explains the structures of DNA and analyses the mechanisms of inheritance and how processes of reproduction ensure continuity of species BIO11/12-5 conducts investigations to collect valid and reliable primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 onalyses and evaluates primary and secondary data and information. BIO11/12-5 conducts investigations to collect valid and reliable primary and secondary data and information. BIO11/12-5 conducts investigations to collect valid and compare the forms in which DNA exists in eukaryotes and prokaryotes (ACSBL076) Construct appropriate representations to model and compare the forms in which DNA exists in eukaryotes and prokaryotes (ACSBL076) • model the process of polypeptide synthesis, including: (ACSBL079) • transcription and translation • assessing the importance of mRNA and tRNA in transcription and translation (ACSBL079) • analysing the function and inportance of polypeptide synthesis (ACSBL080) <t< th=""><th>Assessment Task: Model Building and Report</th></t<>	Assessment Task: Model Building and Report				
Outcomes assessed (NESA) B(011/12-4' selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media B(011/12-4' selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media B(011/12-4' selects and processes appropriate qualitative and secondary data, critical thinking skills and scientific processes B(011/12-7' communicates scientific understanding using suitable language and terminology for a specific audience or purpose B(012-12' axplains the structures of DNA and analyses the mechanisms of inheritance and how processes of reproduction ensure continuity of species B(011/12-5 conducts investigations to collect valid and reliable primary and secondary data and information. B(011/12-5 analyses and evaluates primary and secondary data and information. B(011/12-5 analyses and evaluates primary and secondary data and information. B(011/12-5 conducts investigations to collect valid and reliable primary and secondary data and information. B(011/12-5 analyses and evaluates primary and secondary data and information. B(011/12-5 conducts investigations to collect valid and reliable primary and secondary data and information. B(011/12-5 analyses and evaluates primary and secondary data and information. B(011/12-5 conducts investigations to collect valid and reliable primary and secondary data and information. B(011/12-5 conducts investigations to collect valid and reliable primary and secondary data and informat	Assessment Weighting: 20% Due: Term 4 Week 8 Date: 27/11/2023				
BIO11/12-4 selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media BIO11/12-7 communicates scientific problems using primary and secondary data, critical thinking skills and scientific processes BIO11/12-7 communicates scientific understanding using suitable language and terminology for a specific audience or purpose BIO12-12 explains the structures of DNA and analyses the mechanisms of inheritance and how processes of reproduction ensure continuity of species BIO11/12-3 conducts investigations to collect valid and reliable primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. ACSBL079) - transcription and translation ergo polypeptide synthesis, including: (ACSBL079) - transcription and importance of polypeptide synthesis (ACSBL080) - aassessing the importance of mRNA and tRNA in transcription and translation (ACSBL079) - analysing the function and importance of polypeptide synthesis (ACSBL081) - analysing the function and function of proteins in living things Task	Task Type: Hand in Task 🛛 In Class Task 🖂 Practical Task 🗌				
appropriate media BIO11/12-7 communicates scientific problems using primary and secondary data, critical thinking skills and scientific processes BIO11/12-7 communicates scientific understanding using suitable language and terminology for a specific audience or purpose BIO12-12 explains the structures of DNA and analyses the mechanisms of inheritance and how processes of reproduction ensure continuity of species BIO11/12-3 conducts investigations to collect valid and reliable primary and secondary data and information. BIO11/12-3 analyses and evaluates primary and secondary data and information. BIO11/12-3 analyses and evaluates primary and secondary data and information. Module 5 DNA and Polypeptide Synthesis Inquiry question: Why is polypeptide synthesis important? Students: • construct appropriate representations to model and compare the forms in which DNA exists in eukaryotes and prokaryotes (ACSBL076) • model the process of polypeptide synthesis, including: (ACSBL079) • transcription and translation • assessing the limportance of mRNA and tRNA in transcription and translation (ACSBL079) • analysing the function and importance of polypeptide synthesis (ACSBL080) • assessing how genes and environment affect phenotypic expression (ACSBL081) • investigate the structure and function of proteins in living things Task Description/Overview Section 1- Construction of Model- Polypeptide Synthesis (20 marks) Section 2- Report and In-class questions (40 marks) Total: 60 marks Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call (8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. During this time, you can plan the construction of your model and write a report on this inquiry	Outcomes assessed (NESA)				
BiO11/12-6 solves scientific problems using primary and secondary data, critical thinking skills and scientific processes BiO11/12-7 communicates scientific understanding using suitable language and terminology for a specific audience or purpose BiO12-12 explains the structures of DNA and analyses the mechanisms of inheritance and how processes of reproduction ensure continuity of species BiO11/12-3 conducts investigations to collect valid and reliable primary and secondary data and information. BiO11/12-3 conducts investigations to collect valid and reliable primary and secondary data and information. BiO11/12-3 conducts investigations to collect valid and reliable primary and secondary data and information. BiO11/12-3 conducts investigations to collect valid and reliable primary and secondary data and information. BiO11/12-3 conducts investigations to collect valid and reliable primary and secondary data and information. BiO11/12-3 conducts investigations to collect valid and reliable primary and secondary data and information. BiO11/12-3 conducts investigations to collect valid and reliable primary and secondary data and information. BiO11/12-3 conducts investigations to collect valid and reliable primary and secondary data and information. BiO11/12-3 conducts appropriate representations to model and compare the forms in which DNA exists in eukaryotes and prokaryotes (ACSBL076) • model the process of polypeptide synthesis, including: (ACSBL079) • transcription and translation • assessing the function and importance of polypeptide synthesis (ACSBL080) • assessing the function and minortance of polypeptide synthesis (ACSBL081) • investigate the structure and function of proteins in living things Task Description/Overview Section 1- Construction of Model- Polypeptide Synthesis (20 marks) Section 2- Report and In-class questions (40 marks) Total: 60 marks Due Date- Monday 27/11/23 Hand in before roll call (8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All					
BIO12-12 explains the structures of DNA and analyses the mechanisms of inheritance and how processes of reproduction ensure continuity of species BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. BIO11/12-5 analyses and evaluates and information and ransidion and inportance of polypeptide synthesis (ACSBL079) - analysing the function and importance of polypeptide synthesis (ACSBL080) - analysing the function and function of proteins in living things BIO1	BIO11/12-6 solves scientific problems using primary and secondary data, critical thinking skills and scientific processes BIO11/12-7 communicates scientific understanding using suitable language and terminology for a specific audience or				
BiO11/12-3 conducts investigations to collect valid and reliable primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information. Module 5 DNA and Polypeptide Synthesis Inquiry question: Why is polypeptide synthesis important? Students: • construct appropriate representations to model and compare the forms in which DNA exists in eukaryotes and prokaryotes (ACSBL076) • model the process of polypeptide synthesis, including: (ACSBL079) • transcription and translation • assessing the importance of mRNA and tRNA in transcription and translation (ACSBL079) • analysing the function and importance of polypeptide synthesis (ACSBL080) • assessing how genes and environment affect phenotypic expression (ACSBL081) • investigate the structure and function of proteins in living things Task Description/Overview Section 1- Construction of Model- Polypeptide Synthesis (20 marks) Section 2- Report and In-class questions (40 marks) Total: 60 marks Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6.	BIO12-12 explains the structures of DNA and analyses the mechanisms of inheritance and how processes of				
DNA and Polypeptide Synthesis Inquiry question: Why is polypeptide synthesis important? Students: • construct appropriate representations to model and compare the forms in which DNA exists in eukaryotes and prokaryotes (ACSBL076) • model the process of polypeptide synthesis, including: (ACSBL079) - transcription and translation - assessing the importance of mRNA and tRNA in transcription and translation (ACSBL079) - analysing the function and importance of polypeptide synthesis (ACSBL080) - assessing how genes and environment affect phenotypic expression (ACSBL081) • investigate the structure and function of proteins in living things Task Description/Overview Section 1- Construction of Model- Polypeptide Synthesis (20 marks) Section 2- Report and In-class questions (40 marks) Total: 60 marks Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. During this time, you can plan the construction of your model and write a report on this inquiry	BIO11/12-3 conducts investigations to collect valid and reliable primary and secondary data and information. BIO11/12-5 analyses and evaluates primary and secondary data and information.				
Why is polypeptide synthesis important? Students: • construct appropriate representations to model and compare the forms in which DNA exists in eukaryotes and prokaryotes (ACSBL076) • model the process of polypeptide synthesis, including: (ACSBL079) - transcription and translation - assessing the importance of mRNA and tRNA in transcription and translation (ACSBL079) - analysing the function and importance of polypeptide synthesis (ACSBL080) - assessing how genes and environment affect phenotypic expression (ACSBL081) • investigate the structure and function of proteins in living things Task Description/Overview Section 1- Construction of Model- Polypeptide Synthesis (20 marks) Section 2- Report and In-class questions (40 marks) Total: 60 marks Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. During this time, you can plan the construction of your model and write a report on this inquiry					
Students: • construct appropriate representations to model and compare the forms in which DNA exists in eukaryotes and prokaryotes (ACSBL076) • model the process of polypeptide synthesis, including: (ACSBL079) - transcription and translation - assessing the importance of mRNA and tRNA in transcription and translation (ACSBL079) - analysing the function and importance of polypeptide synthesis (ACSBL080) - assessing how genes and environment affect phenotypic expression (ACSBL081) • investigate the structure and function of proteins in living things Task Description/Overview Section 1- Construction of Model- Polypeptide Synthesis (20 marks) Section 2- Report and In-class questions (40 marks) Total: 60 marks Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. During this time, you can plan the construction of your model and write a report on this inquiry					
 construct appropriate representations to model and compare the forms in which DNA exists in eukaryotes and prokaryotes (ACSBL076) model the process of polypeptide synthesis, including: (ACSBL079) transcription and translation assessing the importance of mRNA and tRNA in transcription and translation (ACSBL079) analysing the function and importance of polypeptide synthesis (ACSBL080) assessing how genes and environment affect phenotypic expression (ACSBL081) investigate the structure and function of proteins in living things Task Description/Overview Section 1- Construction of Model- Polypeptide Synthesis (20 marks) Section 2- Report and In-class questions (40 marks) Total: 60 marks Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis.					
prokaryotes (ACSBL076) • model the process of polypeptide synthesis, including: (ACSBL079) - transcription and translation - assessing the importance of mRNA and tRNA in transcription and translation (ACSBL079) - analysing the function and importance of polypeptide synthesis (ACSBL080) - assessing how genes and environment affect phenotypic expression (ACSBL081) • investigate the structure and function of proteins in living things Task Description/Overview Section 1- Construction of Model- Polypeptide Synthesis (20 marks) Section 2- Report and In-class questions (40 marks) Total: 60 marks Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis.					
 model the process of polypeptide synthesis, including: (ACSBL079) transcription and translation assessing the importance of mRNA and tRNA in transcription and translation (ACSBL079) analysing the function and importance of polypeptide synthesis (ACSBL080) assessing how genes and environment affect phenotypic expression (ACSBL081) investigate the structure and function of proteins in living things Task Description/Overview Section 1- Construction of Model- Polypeptide Synthesis (20 marks) Section 2- Report and In-class questions (40 marks) Total: 60 marks Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. 					
 - assessing the importance of mRNA and tRNA in transcription and translation (ACSBL079) - analysing the function and importance of polypeptide synthesis (ACSBL080) - assessing how genes and environment affect phenotypic expression (ACSBL081) • investigate the structure and function of proteins in living things Task Description/Overview Section 1- Construction of Model- Polypeptide Synthesis (20 marks) Section 2- Report and In-class questions (40 marks) Total: 60 marks Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. 	· · · ·				
 - analysing the function and importance of polypeptide synthesis (ACSBL080) - assessing how genes and environment affect phenotypic expression (ACSBL081) • investigate the structure and function of proteins in living things Task Description/Overview Section 1- Construction of Model- Polypeptide Synthesis (20 marks) Section 2- Report and In-class questions (40 marks) Total: 60 marks Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. 	- transcription and translation				
 - assessing how genes and environment affect phenotypic expression (ACSBL081) • investigate the structure and function of proteins in living things Task Description/Overview Section 1- Construction of Model- Polypeptide Synthesis (20 marks) Section 2- Report and In-class questions (40 marks) Total: 60 marks Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. 	 assessing the importance of mRNA and tRNA in transcription and translation (ACSBL079) 				
 investigate the structure and function of proteins in living things Task Description/Overview Section 1- Construction of Model- Polypeptide Synthesis (20 marks) Section 2- Report and In-class questions (40 marks) Total: 60 marks Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given 5 periods in class to research on IQ 3: DNA and polypeptide synthesis. During this time, you can plan the construction of your model and write a report on this inquiry 	 analysing the function and importance of polypeptide synthesis (ACSBL080) 				
Task Description/Overview Section 1- Construction of Model- Polypeptide Synthesis (20 marks) Section 2- Report and In-class questions (40 marks) Total: 60 marks Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. During this time, you can plan the construction of your model and write a report on this inquiry	 assessing how genes and environment affect phenotypic expression (ACSBL081) 				
Section 1- Construction of Model- Polypeptide Synthesis (20 marks) Section 2- Report and In-class questions (40 marks) Total: 60 marks Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. During this time, you can plan the construction of your model and write a report on this inquiry					
Section 2- Report and In-class questions (40 marks) <u>Total: 60 marks</u> Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. During this time, you can plan the construction of your model and write a report on this inquiry	Task Description/Overview				
Total: 60 marks Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. During this time, you can plan the construction of your model and write a report on this inquiry	Section 1- Construction of Model- Polypeptide Synthesis (20 marks)				
Detailed Assessment Task Description Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. During this time, you can plan the construction of your model and write a report on this inquiry	Section 2- Report and In-class questions (40 marks)				
Due Date- Monday 27/11/23 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. During this time, you can plan the construction of your model and write a report on this inquiry	Total: 60 marks				
 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. During this time, you can plan the construction of your model and write a report on this inquiry 	Detailed Assessment Task Description				
 Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS). All students will be completing In-class questions on 27/11/23 on Monday period 5 and 6. You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis. During this time, you can plan the construction of your model and write a report on this inquiry 					
You will be given <u>5 periods</u> in class to research on IQ 3: DNA and polypeptide synthesis . During this time, you can plan the construction of your model and write a report on this inquiry	Hand in before roll call(8.20 am) in D04- Model and printed copy of Report to be submitted at this time (Also submit on CANVAS).				
	You will be given 5 periods in class to research on IQ 3: DNA and polypeptide synthesis .				

Section 1- Construction of Model- Polypeptide Synthesis

You are required to construct a model demonstrating the stages/processes involved in polypeptide synthesis.

On your model, the location of the processes within the cell must be clearly represented i.e. nucleus or cytoplasm. You must also include a brief description of the processes occurring during each stage

The stages which must be displayed on your model are listed below:

a) DNA structure.

Include • complimentary nitrogenous bases • sugar phosphate backbone • hydrogen bonds • 3 prime and 5 prime ends

b) Transcription

Include • RNA polymerase • mRNA formation •mRNA processing (splicing)

c) Translation

Include • mRNA codons • tRNA anticodons and amino acids • growing chain of amino acids

d) Protein Folding

Section 2- Report and In- class Questions

Using a variety of resources, students are to write a report (summary notes) on all the dot points included in Inquiry question 3.

Why is polypeptide synthesis important? Students:

• construct appropriate representations to model and compare the forms in which DNA exists in eukaryotes and prokaryotes (ACSBL076)

- model the process of polypeptide synthesis, including: (ACSBL079)
- transcription and translation
- assessing the importance of mRNA and tRNA in transcription and translation (ACSBL079)
- analysing the function and importance of polypeptide synthesis (ACSBL080)
- assessing how genes and environment affect phenotypic expression (ACSBL081)
- investigate the structure and function of proteins in living things

You may use visuals, labelled diagrams to explain the processes.

These notes can be used to answer in-class questions during the double period on 27/11/23 period 5 and period 6.

Report not to exceed three A4 pages (double sided).

Resources to write report:

Nelson: Yr 12 Biology in Focus Pearson: Yr 12 Biology ATOMI Class notes and booklets provided by your teacher

Section 1 MODEL			MARKS			
	10-9	8-7	6-5	4-3	2-1	0
Accuracy:	Model accurately	Model accurately	Model mostly	Model reflects	Model somewhat	Insufficient
Scientific	reflects the scientific	reflects the	reflects the	some of the	reflects the	evidence
	concept.	scientific concept.	scientific	scientific concept.	scientific concept.	
concept -	Model is detailed	Model is detailed	concept.	Model reflects a	Model reflects a	
Transcription &	and demonstrates a	reflecting a	Model reflects	basic	limited	
Translation	sophisticated	thorough	a sound	understanding of	understanding of	
	understanding of	understanding of	understanding	transcription &	transcription &	
	transcription &	transcription &	of transcription	translation.	translation.	
	translation. Links	translation.	& translation.			
	explanation to					
	stages in the process					
	5	4	3	2	1	0
Clarity/Design:	Labels & keys are	Labels & keys are	Labels or keys	Labels &/or keys	Labels & keys are	Insufficient
	correct and easy to	correct and easy to	are mostly	are missing.	difficult to read or	evidence
_	read.	read.	correct but may	Labels and keys	missing.	
Ease of	Labels and keys add	Labels and keys	be difficult to	add basically to	Labels and keys add	
reading/	an extensive	add a thorough	read.	an understanding	limitedly to an	
understanding	understanding of	understanding of	Labels and keys	of the model.	understanding of	
understanding	the model.	the model.	add a sound	Colour is used	the model.	
	Identifying all	Colour is used	understanding	less	Colour is not used.	
	aspects of the	appropriately to	of the model.	appropriately.		
	process.	represent the	Colour is used			
	Colour is used	scientific concept.	to represent			
	appropriately and		the scientific			
	consistently to		concept.			
	represent the					
	scientific concept.					
	5	4	3	2	1	0
Creativity:	Model is two or	Model is two or	Model is	Model is	Model is	Insufficient
-	three-dimensional.	three-dimensional.	two-dimensional.	two-dimensional.	two-dimensional.	Evidence
Chaine 8	Materials & shapes	Materials & shapes	Materials &	Shapes are	Shapes are mostly	
Choice &	are appropriate to	are appropriate to	shapes are	appropriate to	appropriate to the	
Appropriateness of	the represented	the represented	mostly	the represented	represented	
materials	concept.	concept.	appropriate to	concept.	concept.	
materials	Aspects of the model are		the			
	movable and interactive		represented			
			concept.			
					TOTAL	

This is an individual task therefore should be completed individually. Any plagiarism will result in a mark of zero and an N determination will be issued.

Assessment Criteria						
Grade	Description	Mark Range				
Outstanding (O)	The student has an extensive knowledge and understanding of the content and can readily apply this knowledge. In addition, the student has achieved a very high level of competence in the processes and skills and can apply these skills to new situations.	84.5-100				
High (H)	The student has a thorough knowledge and understanding of the content and a high level of competence in the processes and skills. In addition, the student is able to apply this knowledge and these skills to most situations.	69.5-84				
Sound (S)	The student has a sound knowledge and understanding of the content and has achieved a good level of competence in the processes and skills.	49.5-69				
Basic (B)	The student has a basic knowledge and understanding of the content and has achieved a basic level of competence in the processes and skills.	27.5-49				
Limited (L)	The student has an elementary knowledge and understanding in a few areas of the content and still requires further work to achieve competence in the processes and skills.	0-27				

Satisfactory completion of courses

A course has been satisfactorily completed, when the student has:

- Followed the course developed/endorsed by the NSW Educational Standards Authority (NESA)
- Applied himself/herself with diligence and sustained effort to the set tasks and experiences provided in the course.
- Achieved some or all of the course outcomes