Gymea Technology High School
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Science

Year 8, Human Body

BODY PARTS RESEARCH

Task Name: Body Parts Project	**Unit: The Human Body**
Task Distributed: Monday 27th July	**Task Due: 14th August, 2020**
Task Type: Research Assignment	**Syllabus Outcomes: LW4, 3VA, 7WS, 9WS**
Task Weighting: 10% **Literacy Weighting: 10%**	**Task number for Course: 4**

Task Description

Students need to be able to communicate scientific findings to an audience. In addition, students are required to consider the advancement of technologies and their impact on human society.

As medical technology improves, our ability to maintain our health, well being and lifestyle is also improved. Developments in material science and electronics have allowed for extension of life and human function by replacing faulty organs with synthetic or man-made alternatives.

This task is a compulsory component of the NSW science syllabus and a serious attempt at the assignment, by the required time, is necessary to satisfy the requirements of this course.

Research: An electronic or mechanical device that assists or replaces a damaged body part, organ or system.

For this device:

a) Name the device and the inventor or team that developed it.
b) The date or time period of development.
c) Describe its role (basic description of what it does) and why it is needed.
d) Name the body **system or systems** with which it is involved. (E.g. muscular, nervous, skeletal etc)
e) Explain **how** it operates.
f) Name the materials used and state why they were specifically chosen.
g) Discuss the limitations compared to the structure it replaces.
h) Provide a labelled diagram or picture.

Suggestions: heart valves, pacemakers, prosthetic limbs, finger, knee or hip joints, 3D printed organs, dialysis machine, cochlear implants, eye lens replacements, artificial blood vessels etc.

NESA Glossary of Key Words

- Understand the verb associated with the task. The verb will provide an understanding of the detail needed to successfully answer the question.
- Check the NESA Glossary of Key Words https://educationstandards.nsw.edu.au/wps/portal/nesa/11-12/hsc/hsc-student-guide/glossary-keywords

Details of Submission

Students must produce a digital document, preferably Microsoft word, but a power-point presentation is also acceptable. A hardcopy (printed) version of this document must be submitted, on or before the due date, to your teacher for marking. It should include;

- ***Introduction/ Background*** – What it is about and history of device.
- ***Main body*** – include information on points listed above (**a** to **h**).
- ***Conclusion*** - assessing the impact of the Technology on Human society.
- ***References –*** A list of all sources of information used to complete the task. Should include *more than one* resource (ie. Not just websites!) and referenced according to Harvard Referencing standards. Use the link below for information on Harvard referencing.

https://www.citethisforme.com/harvard-referencing

Proof of completion can be ensured by uploading a full copy of the assignment to the **Year 8 Google** classroom by the due date; however, a hard copy should still be provided.

The finished assignment should not exceed 5 pages excluding title page but may be successfully completed in less. Late submissions lose 10% per day.

Assessment Procedures

All students should be fully aware of the school assessment procedures.

Students should access their 2020 Assessment Guide for more information.

Feedback provided

- The task will be typically returned to students within two school weeks of the submission date/sitting.
- At this time feedback including information on how to improve will be delivered through mechanisms such as marking criteria, and/or written comments.
- Students can clarify or seek further feedback by arranging to meet with their teacher/assessment marker.

Self-Reflection Component

Students will be required to complete a self-reflection worksheet at the time students receive their assessment mark and teacher feedback. Self-reflection is an important part of the learning process as it provides an opportunity to reflect on the strength of our performance, as well as areas that have been identified to strengthen in future tasks.

What Areas of Learning will this Assessment Task Report On?

How students:

- Communicate scientific findings and knowledge to an audience.
- Undertake secondary sources and/or first-hand investigations to collect valid and reliable data, individually and collaboratively.
- Gain knowledge and Understanding of the practice of Science and how Science impacts on Society, Technology, and the Environment.

Marking Rubric (Literacy) - You will also be assessed on how well you write and phrase the information you collect. This will be marked according to the standard literacy rubric as provided below, and it is worth an additional 5 marks towards the overall task total of 35 marks.

LITERACY MARKING CRITERIA	Descriptors				
	0	0.25	0.5	0.75	1
Vocabulary Uses technical vocabulary to explain concepts and/or range of precise and appropriate words for effect.	- Symbols or drawings	- Only simple and nontechnical words are used.	- Some precise and technical words are used.	- Sustained use of precise and technical words.	-Sustained, consistent and fluent use of precise and technical words.
Punctuation Use of correct and appropriate punctuation for effect and to aid in reading of the text	- No or minimal evidence of correct sentence punctuation (less than 25%)	- Limited evidence of correct sentence punctuation (at least 25%)	- Some correct sentence level punctuation (at least 50%).	- Mostly correct sentence level punctuation (80%) and *at least two* examples of other punctuation.	-Writing contains accurate use of all applicable punctuation.
Sentences Intentionally constructs a variety of sentences to match purpose and audience	- No evidence of sentences Drawings, symbols, a list of words OR text fragments	- At least one sentence is used correctly.	- Some correct formation of sentences. (at least 50%)	- Most sentences (80%) are correct but are largely unsophisticated.	- All sentences are correct including sophisticated sentences.
Paragraphs Paragraphs are used to effectively structure information and partition events and ideas	- No correct use of paragraphing - may be a block of text or random breaks	- Ideas are separated, provides at least ONE correct break between ideas - Paragraphs may contain some unrelated ideas	- At least ONE paragraph is well structured and develops an idea	- All paragraphs are focused on one idea or a set of like ideas but may not be linked effectively.	- Paragraphing creates flow, connectivity and supports argument.
Text Structure Uses features of the appropriate text type	- No evidence of structural components of the appropriate text type	- Minimal evidence of the structural components of the appropriate text type.	- Some evidence of the structural components of the appropriate text type.	- Substantial evidence of the structural components of the appropriate text type.	- Coherent and controlled use of the appropriate structural components of the text type.

Marking Criteria (Research and Presentation)

A marking criterion is attached detailing how marks will be allocated. To achieve top marks, please be sure to refer to the marking criteria prior to starting, during and again before submitting your assessment task.

Outcome	Indicator	Experiencing Difficulty	Developing	Competent	Outstanding	Mark	Total
LW4 ***SCIENTIFIC KNOWLEDGE***	Inventor and Date	Not addressed	Name or date only	Name **and** date			
		0	**1**	**2**			
	Role of Device	Not addressed	Describes briefly the need of the device	Describes briefly the role and its need	Describes in detail the role and its need		
		0	**1**	**2**	**3**		
	Body System	System not identified or stated	Correctly named body system(s)				
		0	**1**				
	Device Operation	Not addressed	States two aspects of how it operates	Describes two aspects of how it operates	Explains all aspects of how it operates in detail		
		0	**2**	**4**	**6**		
	Diagram	Not included	Includes diagram	Includes diagram with labels			
		0	**1**	**2**			
3VA ***DEVELOPMENTS IN SCIENCE***	Materials	Not addressed	One material	One material with explanation	Two materials =2 With explanations = 4		
		0	**1**	**2**	**4**		
	Limitations	Not addressed	States one limitation	Describes one limitation	Discusses two imitations with descriptions		
		0	**1**	**2**	**4**		
9WS ***PRESENTING INFORMATION***	Presentation	Overall presentation of poor standard	Presentation is of acceptable standard	Presentation is of high standard			
		1	**2**	**3**			
7WS ***GATHER INFORMATION FROM SECONDARY SOURCES***	Secondary sources	Uses no resources.	Uses only one type resource.	Uses many secondary resources.	Uses many secondary resources.		
		0	**1**	**2**	3		
		No sources referenced	Sources referenced incorrectly	Sources referenced correctly			
SUBMISSION		**0**	**1**	**2**			
	Sets and works to timelines and goals.	Assignment was not handed in.	Assignment was not handed in on time.	Assignment was handed in on time.			
		Zero marks	**Less 10% each day up to 5 days**	**Full Marks**			
					Literacy		**/5**
					Research		**/30**
					Total		**/35**