COICNIOE INIVE	'CTIO ATIONI 💳	NAME/S	PROJECT	JUDG	E/S
SCIENCE INVE	:5116A11UN				
COMPREHENSIVE (3)	COMPLETED (2)		ATTEMPTED (1)		TOTAL
	ASK a question				SCORE
I have asked a question that can be answered through experimentation.	I have asked a question that can be answered through experimentation.	My question experiments	cannot be answered throug	h	
I have used variables in my question.	My use of variables is vague or unclear to follow.	OR No variables	s are used in my question.		
Thave used variables in my question.	JUSTIFY your project	140 Variables	sare used in my question.		
		l.,			
I have explained the reason for my choice of investigation topic and how it links to one of the Global Sustainable Goals.	I have explained the reason for my choice of investigation topic and identified which of the Global Sustainable Goals it links to.	investigatio	d the reason for my choice of n topic and/or identified whi ainable Goals it links to.		
	HYPOTHESIS Make a prediction				
My hypothesis makes a logical prediction based upon background research of cited sources .	My hypothesis makes a logical prediction based upon background research.		sis makes a prediction with s o a reason why that choice w		
	CONDUCT the experiment				
I have described ALL of the following in my	I have outlined MOST of the following in my				
procedure: - How to change my independent variable - How to measure my dependent variable - How to keep each of my controlled variables the same - Specific equipment and materials needed to successfully complete my investigation - Safety considerations	procedure: - How to change my independent variable - How to measure my dependent variable - How to keep each of my controlled variables the same - Specific equipment and materials needed to successfully complete my investigation - Safety considerations		ure I have provided is missing hich make it hard to follow or		
Scientific approach: - I have conducted sufficient trials to establish validity in my data - I have selected an appropriate range of IV values that allows for the establishment of a trend	Scientific approach: - I have conducted trials to establish a dataset to work from.				
ANALYSE and PF	RESENT: The results (RAW DATA and OBSERVATIONS COL	ıld be incorporat	red into a LOG BOOK)		
ALL raw data is accessible and available. Descriptive observations are provided if relevant.	MOST of the raw data is accessible and available.	LIMITED rav	v data is accessible and avail	able.	
I have correctly selected an appropriate method for processing my data (selected appropriate calculations to perform).	I have selected a method for processing my data (selected calculations to perform).	I have made	some calculations with my	data.	
I have presented data with ALL of the following: - In a way that is easy to read - Has clear data labels - Appropriate units of measurement I have selected an appropriate graph to present trends in my data.	I have presented data with MOST of the following: In a way that is easy to read Has clear data labels Units of measurement I have presented my data in a graph.	following: - In a way t - Has clear - Units of n	nted data with SOME of the hat is easy to read data labels neasurement npted to present my data in a	graph	
	CONCLUDE				
Includes ALL of the following information:	Includes MOST of the following information:	Includes SO	ME of the following informat	ion:	
 stated a conclusion based on a correct interpretation of the data described the trends in my graph explained results using scientific reasoning discussed the validity of conclusion by referring to scientific process (hypothesis, method, variables, research) explained the learning gained from this process. 	 stated a conclusion based on a correct interpretation of the data described the trends in my graph explained results using scientific reasoning discussed the validity of conclusion by referring to scientific process (hypothesis, method, variables, research) explained the learning gained from this process. 	interpreta - described - explained - discussed referring method, v	conclusion based on a correct ation of the data d the trends in my graph I results using scientific read d the validity of conclusion b to scientific process (hypoth variables, research) I the learning gained from the	soning y nesis,	
	COMMUNICATE				
My display shows creativity and consideration to best communicate information relevant to the audience. - easy to follow - draws the eye to it - only important information is displayed, log book utilised to share information.	My display shows creativity OR consideration to communicate information to the audience. - easy to follow - errors do not interrupt understanding - display is overcrowded	information - it is hard - errors int - display is	nas MOST of the important to follow in places errupt understanding minim overcrowded or distracts OF nformation		

SCIENCE THROUGH ART

NAME	ART PIECE TITLE		JUDGE/S	
COMPREHENSIVE (3)	COMPLETED (2)	ATTEM	PTED (1)	TOTAL SCORE
The piece of art and descripti	MESSAGE on have a clear message or theme linked	to the sustainable de	evelopment goals	
Message is clear and explored in depth	Message is clear.	Message is not clearly represented		
IMPACT The artwork and description impact the viewer				
The piece of art and description inspire change / growth in understanding for the viewer	The intended impact is clear to the viewer	The intended impact is not clear		
LEARNING The artwork and description represent the level of learning the individual has undertaken linked to the science and their message.				
Student has explained their learning in depth	Student has described learning	Student has made statements referring to learning OR links to sustainable development goals		1
Link to the Sustainable Development Goals has been explained	Link to the Sustainable Development Goals has been identified			
	ART PIECE GUIDANCE			
Art piece must have acc	ompanying video explaining student thin Maximum length: 2 minutes	king associated with	physical art.	
PHYSICAL DIMENSIONS:	2D (maximum A3 dimensions - 42cm x 2 3D (maximum 42cm cube dimensions - 4	3.7cm) 2cm x 42cm x 42cm)		

The five phases of the design process:



I have a challenge. How do I approach it?



I learned something. How do I interpret it?



I see an opportunity.
What do
I create?



I have an idea.

How do I build it?



I tried something. How do I evolve it?





In this phase, designers seek to understand the needs of the people or try to identify the concerns/problems that surfaces to the people involved through asking powerful questions

INTERPRETATION



2

With the desirable, envisioned success established, designers will go in depth to determine and ask of themselves the right questions to define the desired outcome

IDEATION



Idea generation is done at this phase where the designers are able to generate as many ideas as possible to find ways to bring the desired outcome into fulfilment

EXPERIMENTATION



4

During
Experimentation,
the idea is being
made tangible so
that designers are
able to have a first
taste to see how it
will look like

EVOLUTION



During the Evolution phase, designers constantly receive feedback on the solutions provided and ascertain whether the solution is meeting the needs





How do I interpret it?



What do I create?



How do I build it?



How do I improve it?

TECHNICI OCV IN	VECTIC ATION —	NAME/S PROJECT JUD	GE/S		
TECHNOLOGY IN	VE31IUAIIUN				
COMPREHENSIVE (3)	COMPLETED (2)	ATTEMPTED (1)	TOTAL SCORE		
PROBLEM Explain your project					
I have explained the problem my technology is attempting to address.	I have outlined the problem my technology is attempting to address.	I have stated the problem my technology is attempting to address.			
I have identified which of the Global Sustainable Goals it links to.	I have shown an awareness of the Global Sustainable Goals.	I have not linked my problem to a Global Sustainable Goal.			
I have researched and summarized current solution/s to the problem and analyzed their strengths and weaknesses.	I have researched and outlined current solution/s to the problem and stated their strengths and weaknesses.	I have outlined current solution/s to the problem and stated their strengths and/or weaknesses.			
IDEATE E	Brainstorming possible solutions and how they a	ddress my problem			
I have presented a range of original and varied possible solutions to my problem.	I have presented possible solutions to my problem.				
I have evaluated my solutions based on a range of criteria to establish which is the most favourable idea to further develop.	I have decided which of my solutions is the most favourable idea to further develop and explained the reason for my choice.	I have one idea for a possible solution without considering alternative options.			
	PROTOTYPE or proof of concept mode	el			
I have designed and built a scaled representation of my best idea.	I have built a representation of my best idea.	I have attempted to build or show a representation of my best idea.			
My representation is reproducible.	It would be difficult to reproduce.				
REFLECTION and EVALUATION					
I have explained how I have adjusted and refined my prototype from the original idea to the final version, based on feedback and testing.	I have explained how I have adjusted and refined my prototype from the original idea to the final version, based on testing.	I have not demonstrated that I adjusted or refined my prototype			
I have evaluated the strengths and weaknesses of the prototype I developed.	I have identified the strengths and weaknesses of the prototype I developed.	I have identified a/some strengths and/or weaknesses			
COMMUNICATE					
My display shows creativity and consideration to best communicate information relevant to the audience. - easy to follow - draws the eye to it - only important information is displayed, log	My display shows creativity OR consideration to communicate information to the audience easy to follow - errors do not interrupt understanding - display is overcrowded	My display has MOST of the important information. - it is hard to follow in places - errors interrupt understanding minimally - display is overcrowded or distracts OR missing information			

TECHNOLOGY THROUGH ART

<u>I LUIIIIULUU I</u>	<u>I I I I I I U U U I I A I I</u>			
NAME	ART PIECE TITLE	JUDGE/S		
COMPREHENSIVE (3)	COMPLETED (2)	ATTEMPTED (1) TOTAL SCORE		
SOLUTION The artwork and description clearly communicates a technology solution that links to <u>sustainable development goals</u> .				
The technology solution is clear to the viewer and demonstrates innovation.	The technology solution is clear to the viewer	The technology solution is not clear		
IMPACT The artwork and description impact the viewer				
The intended impact inspires change within the viewer.	The intended impact is clear to the viewer	The intended impact is not clear		
LEARNING The artwork and description represent the level of learning the individual has undertaken linked to the science/technology concepts and their message.				
Student has explained their learning in depth	Student has described learning	Student has made statements referring to learning OR links to sustainable		
Link to the Sustainable Development Goals has been explained	Link to the Sustainable Development Goals has been identified	development goals		
ART PIECE GUIDANCE				
Art piece must have accompanying video explaining student thinking associated with physical art. Maximum length: 2 minutes				
PHYSICAL DIMENSIONS: 2D (maximum A3 dimensions - 42cm x 29.7cm) 3D (maximum 42cm cube dimensions - 42cm x 42cm x 42cm)				