

# SCIENCE INVESTIGATION

NAME/S	PROJECT	JUDGE/S

COMPREHENSIVE (3)	COMPLETED (2)	ATTEMPTED (1)	TOTAL SCORE
-------------------	---------------	---------------	-------------

## ASK a question

I have asked a question that can be answered through experimentation.	I have asked a question that can be answered through experimentation.	My question cannot be answered through experimentation OR No variables are used in my question.	
I have used variables in my question.	My use of variables is vague or unclear to follow.		

## JUSTIFY your project

I have explained the reason for my choice of investigation topic and <b>how</b> 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.	I have stated the reason for my choice of investigation topic and/or identified which of the Global Sustainable Goals it links to.	
--	--	--	--

## HYPOTHESIS Make a prediction

My hypothesis makes a logical prediction based upon <b>background research of cited sources.</b>	My hypothesis makes a logical prediction based upon background research.	My hypothesis makes a prediction with some reference to a reason why that choice was made	
--	--	---	--

## CONDUCT the experiment

I have described <b>ALL</b> 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	I have outlined <b>MOST</b> 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	The procedure I have provided is missing key elements which make it hard to follow or recreate.	
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 PRESENT: The results (RAW DATA and OBSERVATIONS could be incorporated into a LOG BOOK)

<b>ALL</b> raw data is accessible and available. Descriptive observations are provided if relevant.	<b>MOST</b> of the raw data is accessible and available.	<b>LIMITED</b> raw data is accessible and available.	
I have <b>correctly selected</b> an appropriate method for processing my data (selected appropriate calculations to perform).	I have <b>selected</b> a method for processing my data (selected calculations to perform).	I have <b>made some</b> calculations with my data.	
I have presented data with <b>ALL</b> 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 <b>MOST</b> 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.	I have presented data with <b>SOME</b> of the following: - In a way that is easy to read - Has clear data labels - Units of measurement  I have attempted to present my data in a graph	

## CONCLUDE

Includes <b>ALL</b> of the following information: - 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.	Includes <b>MOST</b> of the following information: - 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.	Includes <b>SOME</b> of the following information: - 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.	
---	--	--	--

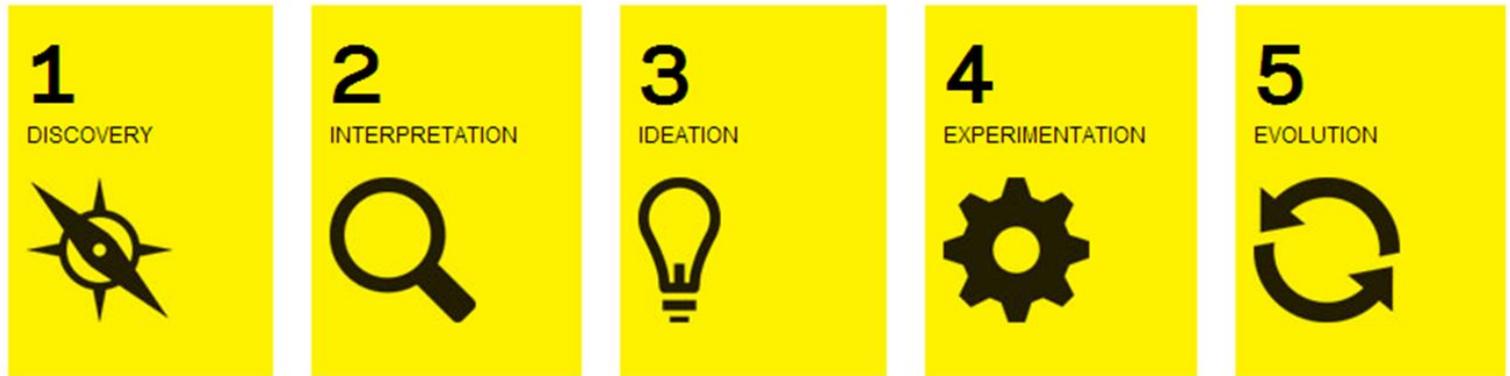
## COMMUNICATE

My display shows creativity and consideration to <b>best</b> 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 <b>OR</b> consideration to communicate information to the audience. - easy to follow - errors do not interrupt understanding - display is overcrowded	My display has <b>MOST</b> of the important information. - it is hard to follow in places - errors interrupt understanding minimally - display is overcrowded or distracts <b>OR</b> missing information	
---	--	---	--

# SCIENCE THROUGH ART

NAME	ART PIECE TITLE		JUDGE/S	
COMPREHENSIVE (3)	COMPLETED (2)	ATTEMPTED (1)	TOTAL SCORE	
MESSAGE				
The piece of art and description have a clear message or theme linked to the sustainable development 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 <b>explained</b> their learning in depth	Student has <b>described</b> learning	Student has <b>made statements</b> referring to learning <b>OR</b> links to sustainable development goals		
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 accompanying video explaining student thinking associated with physical art. <b>Maximum length: 2 minutes</b>				
<b>PHYSICAL DIMENSIONS:</b>	<b>2D</b> (maximum A3 dimensions - 42cm x 29.7cm) <b>3D</b> (maximum 42cm cube dimensions - 42cm 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.**

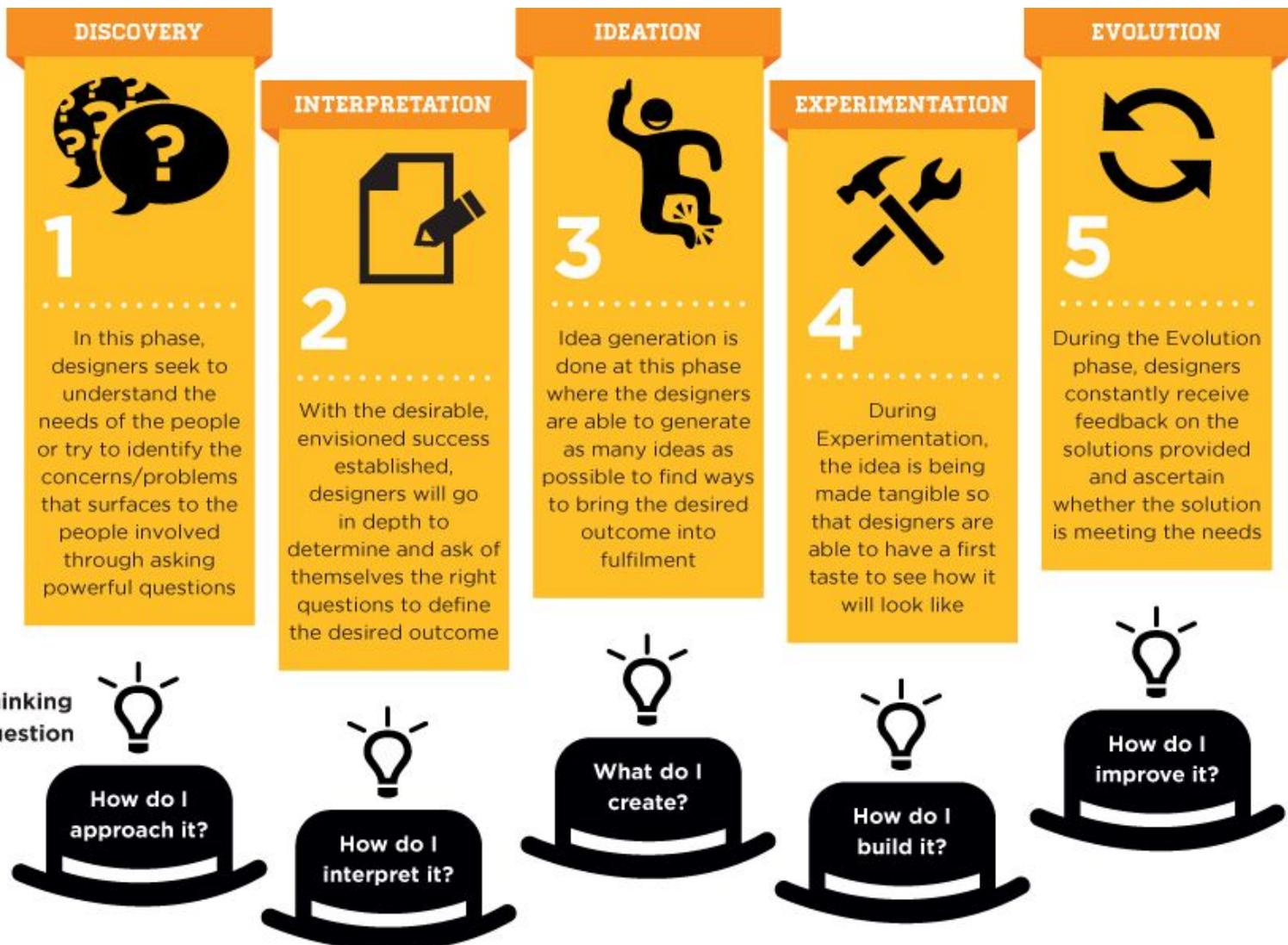
*What do I create?*

**I have an idea.**

*How do I build it?*

**I tried something.**

*How do I evolve it?*



# TECHNOLOGY INVESTIGATION

NAME/S	PROJECT	JUDGE/S

COMPREHENSIVE (3)	COMPLETED (2)	ATTEMPTED (1)	TOTAL SCORE
<b>PROBLEM</b> Explain your project			
I have <b>explained</b> the problem my technology is attempting to address.	I have <b>outlined</b> the problem my technology is attempting to address.	I have <b>stated</b> the problem my technology is attempting to address.	
<b>I have identified</b> which of the Global Sustainable Goals it links to.	<b>I have shown an awareness</b> of the Global Sustainable Goals.	<b>I have not linked my problem to</b> a Global Sustainable Goal.	
I have researched and <b>summarized</b> current solution/s to the problem and <b>analyzed</b> their strengths and weaknesses.	I have researched and <b>outlined</b> current solution/s to the problem and <b>stated</b> their strengths and weaknesses.	I have <b>outlined</b> current solution/s to the problem and stated their strengths <b>and/or</b> weaknesses.	
<b>IDEATE</b> Brainstorming possible solutions and how they address my problem			
I have presented a range of <b>original</b> and <b>varied</b> possible solutions to my problem.	I have presented possible solutions to my problem.	I have one idea for a possible solution without considering alternative options.	
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.		
<b>PROTOTYPE</b> or proof of concept model			
I have designed and built a scaled representation of my best idea.  My representation is reproducible.	I have built a representation of my best idea.  It would be difficult to reproduce.	I have attempted to build or show a representation of my best idea.	
<b>REFLECTION and EVALUATION</b>			
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	
<b>COMMUNICATE</b>			
My display shows creativity and consideration to <b>best</b> 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 <b>OR</b> consideration to communicate information to the audience. - easy to follow - errors do not interrupt understanding - display is overcrowded	My display has <b>MOST</b> of the important information. - it is hard to follow in places - errors interrupt understanding minimally - display is overcrowded or distracts <b>OR</b> missing information	

# TECHNOLOGY THROUGH ART

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 <b>explained</b> their learning in depth	Student has <b>described</b> learning		Student has <b>made statements</b> referring to learning <b>OR</b> links to sustainable development goals	
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 accompanying video explaining student thinking associated with physical art. <b>Maximum length:</b> 2 minutes				
<b>PHYSICAL DIMENSIONS:</b>	<b>2D</b> (maximum A3 dimensions - 42cm x 29.7cm) <b>3D</b> (maximum 42cm cube dimensions - 42cm x 42cm x 42cm)			