

26th April 2020: Made a summary of important info from handbook and from teacher's instructions: -

* Show superior evidence of process documented in process journal at meeting.

Planning (Note from handbook) + info provided by teachers

- Decide what u want to learn about
- Identify what u already know
- Discover what you will need to know
- Create criteria
- Record developments (student should manage this activity)
- * Communicate with supervisor - 3 times as evidence for ATL skills
- Reflect + evaluate
- Choose a global context
- Demonstrate how you met the ATL skills while presenting + reporting
- Demonstrate how you met ATL objectives through PE report + process journal
- Communicate clearly, using communication, organisation + reflection on ATL skills

See **ATL skills** given in chart on Pg 5-8 of Handbook

Document process + record of progress in process journal (can be written/visual/audio/combination)/ paper or electronic or both (Produce evidence through process journal addressing the 4 objectives)

Continued... Note from handbook + info provided by teachers

- Appendices**
 - Select evidence from process journals to demonstrate development in all criteria. These are submitted as appendices at end of report.
 - Max. of 10 extracts to show key development
 - Extracts should demonstrate how you addressed each of the objectives / annotate extracts to highlight this info.
 - Each Extract can be any format in which process was documented
 - Extracts are supporting evidence + won't be individually assessed.
 - Extracts can be visual thinking diagrams / bulleted lists / questionnaires / surveys / charts / short papers / notes / timelines / annotated research / extracts from transcripts / performance / attending / pics, photos, sketches / screenshots of blogs + websites / self + peer assessment feedback

Continued... Note from handbook + info provided by teachers

Resources for investigation + planning

- Relevant + reliable info from variety of sources
- Using media literacy skills as ATL, develop ability to evaluate reliability of sources (Author credibility, currency, accuracy, relevance, intended audience + objectivity of source)
- Demonstrate evidence that you have evaluated integrity of chosen sources.
- Sources can include prior knowledge
- Record info collected from these sources in process journal, along with annotation + possible uses

Resources for demonstrating learning

- Reflect on learning (relative to any topic)
- How transfer of learning impacted project
- Assessing in relation to project goal + global context
- Relate to yourself as a learner + your awareness of development of ATL skills

Continued... Note from handbook + info provided by teachers

- Goals**
 - Identify goal based on interest / strength + weakness
 - Brainstorm
 - Document thinking / research process + development of initial ideas
- Global context (only one)**

Globalization + sustainability

 - Students will explore the interconnectedness of human-made systems and communities; the relationship between local + global processes; how local experiences mediate the global; the opportunities + tensions provided by world-interconnectedness; the impact of decision-making on human-kind + the environment
- Assessment criteria**

Criterion A: Investigating

7-8 - i) Define clear + highly challenging goal + context for the project, based on personal interest

 - Identify prior learning + subject specific knowledge that is consistently highly relevant
 - Demonstrate excellent research skills

Continued...
 Notes from handbook + info provided by teachers

Criterion B: Planning

7-8 i) develop rigorous criteria for the product/outcome
 ii) present a detailed + accurate plan + record of the development process of the project
 iii) demonstrate excellent self-management skills

Criterion C: Action

7-8 i) create excellent product/outcome in response to goal/global context/criteria
 ii) demonstrate excellent thinking skills
 iii) demonstrate excellent communication + social skills

Criterion D: Reflecting

7-8 i) present an excellent evaluation of the quality of product/outcome against criteria
 ii) present excellent reflection on how completely the project has extended my knowledge and understanding of topic and global context
 iii) present substantial reflection on my development as an IB learner throughout the project

Continued... Note from handbook + info provided by teachers

Format of PP Report

- 12 point font
- 1.5 spacing
- Numbered pages
- Header with name + homeroom
- Report should feature subheadings

Should also include:-

MYP Regd forms

- Moderation comment: Personal Project
- MYP Project academic honesty form
- Screen shot from: transition report

Title Page

- Project title
- Anonymous - no name
- Word count
- Illustration of product/outcome - no faces

Table of contents

Neatly formatted with page numbers

Continued... note from handbook + info provided by teachers

Section A: Investigating
Section B: Planning
Section C: Taking Action
Section D: Reflecting

see Handbook for points under trends

Appendix - 10 pages

Bibliography

see handbook for sample report

Section A - Investigating

- Goal and global context for the project defined
- Prior learning and subject specific knowledge identified and discussed
- ATL skills of information and media literacy skills addressed

Section B - Planning

- Describe the success criteria for your product/outcome
- Plan + record the development process of project
- ATL skills of self-management need to be addressed

Section C: Taking Action

- Record the steps you took to complete your product/outcome + show evidence of your completed outcome/product in your appendix
- Make explicit the link between your product/outcome + your goal, global context + criteria

Continued... Note from handbook + info provided by teachers

Section C Continued:-

- Demonstrate the ATL's of thinking, communication + social skills

Section D: Reflecting

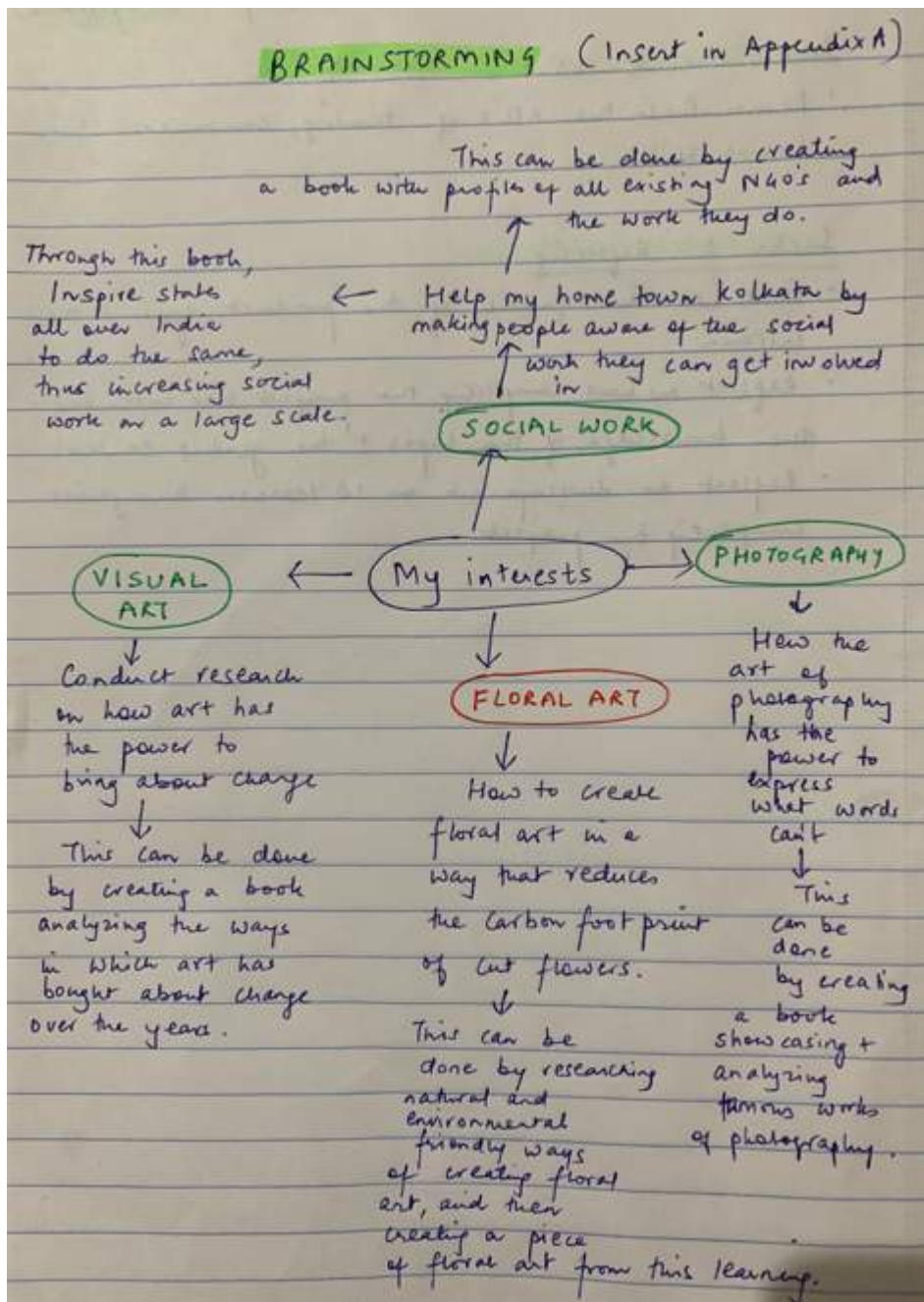
- Evaluate the quality of the product against the criteria
- Reflect on how completely the project has extended their knowledge of the topic + the global context
- Reflect on development as IB learner throughout completing the project

ATL skills used for making the above summaries were **organizational skills**. Using organizational skills, I made a summary of all the information and guidelines about the personal project which I might need during the course of completing the project. In this way, I will ensure that all the information I need is in one place and I do not have to go back and forth searching for it. By doing this, I also save time. I can keep looking at the relevant information, to make sure that I have done all that is needed in a particular context, and nothing has been missed out.

ATL skills used for the brainstorming process:

Through **creative thinking skills**, I mapped out different ideas and questions, and considered all the alternatives for the personal project (this can be seen in the **Brainstorming** image below). Exposure to the year 11 personal project exhibition made this process easier. I thought about my varied interests, and how I could use these to create a challenging project with an impact. Next, I used **critical thinking skills** to decipher how I would make a final selection. I created a chart where I rated my different project ideas based on personal interest, challenge, and the impact it would have (see **Topic Evaluation** below). I used critical thinking skills to rate these to the best of my ability so that the highest resultant score would reveal the most feasible project. I further used **reflection skills** to reflect on the final chosen project "How can we save our environment from the carbon foot print of cut flowers?" and its implications. **Transfer skills** enabled me to make connections between subject specific /prior knowledge and the chosen project.

I then went on to the initial planning for my topic, whereby I contemplated on the *Goal, Global Context, Research* that I would require, and *Prior and Subject Specific Knowledge* (This can be seen in the **Initial Planning** image below).



Topic Evaluation (Also include in **Appendix A** of report under brainstorming)

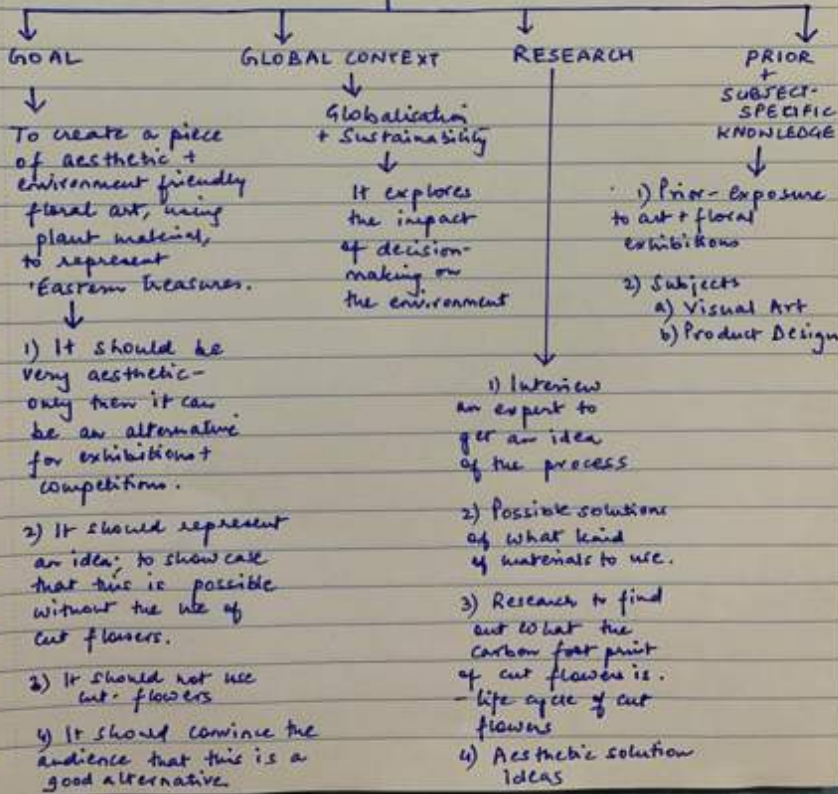
Topic	Product	Subject	Global Context	Personal Interest (/10)	Challenge (/10)	Impact (/10)	Total (/30)	Remarks
How does art have the power to bring about change?	Book	Visual Art	Personal and Cultural Expression	8	8	5	21	This book will explore the different ways in which art has a power to bring about a change.
How can we inspire people in India to get involved in social work and give back to the community?	Book	Social Work	Fairness and Development	8	9	9	26	This book will consist of the profiles and activities of all the NGO's in my home town Kolkata in India. This will help people of Kolkata to become aware of the activities they can be involved in to give back to the community. This can also inspire other states in India to do the same.
How does the art of photography have the power to express what words can't?	Documentary	Photography	Personal and Cultural Expression	8	8	5	21	This documentary will explore the ways in which photography has the power to express thoughts and ideas and bring about a change.
How can we save our environment from the carbon footprint of cut flowers?	A piece of floral art	Floral Art	Globalization and Sustainability	9	9	9	27	This piece of aesthetic and environment friendly floral art will use plant material in its creation and will showcase that floral art can be created in ways that can save our environment from the carbon footprint of cut flowers.

28th April 2020

Continued BRAIN STORMING (Insert in Appendix A)

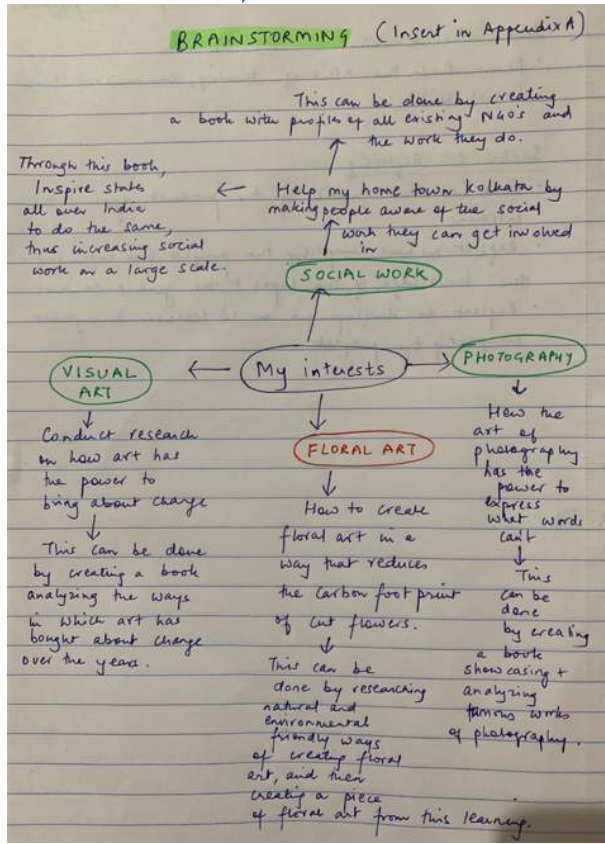
INITIAL TOPIC PLANNING

Can floral art be created in ways that can save our planet from the carbon footprint of cut-flowers?



APPENDIX A -Brainstorming (final Appendix A to include in report at the end)

Brainstorming



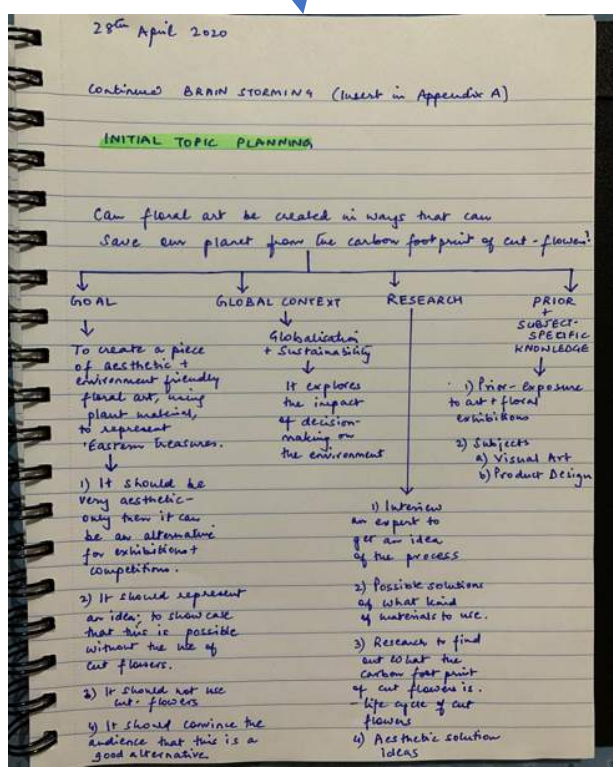
Brainstorming -27th to 28th April

ATL's Used

Through **creative thinking skills**, I mapped out different ideas and questions, and considered all the alternatives for the personal project (this can be seen in the **Brainstorming** image on the left). Exposure to the year 11 personal project exhibition made this process easier. I thought about my varied interests, and how I could use these to create a challenging project with an impact. Next, I used **critical thinking skills** to decipher how I would make a final selection. I created a chart where I rated my different project ideas based on personal interest, challenge, and the impact it would have (see **Topic Evaluation** below). I used critical thinking skills to rate these to the best of my ability so that the highest resultant score would reveal the most feasible project. I further used **reflection skills** to reflect on the final chosen project "How can we save our environment from the carbon foot print of cut flowers?" and its implications. **Transfer skills** enabled me to make connections between subject specific /prior knowledge and the chosen project.

I then went on to the initial planning for my topic, whereby I contemplated on the *Goal, Global Context, Research* that I would require, and *Prior and Subject Specific Knowledge* (This can be seen in the **Initial Planning** image below).

Initial Topic Planning



Topic Evaluation

Topic	Product	Subject	Global Context	Personal Interest (/10)	Challenge (/10)	Impact (/10)	Total (/30)	Remarks
How does art have the power to bring about change?	Book	Visual Art	Personal and Cultural Expression	8	8	5	21	This book will explore the different ways in which art has a power to bring about a change.
How can we inspire people in India to get involved in social work and give back to the community?	Book	Social Work	Fairness and Development	8	9	9	26	This book will consist of the profiles and activities of all the NGOs in my home town Kolkata in India. This will help people of Kolkata to become aware of the activities they can be involved in to give back to the community. This can also inspire other states in India to do the same.
How does the art of photography have the power to express what words can't?	Documentary	Photography	Personal and Cultural Expression	8	8	5	21	This documentary will explore the ways in which photography has the power to express thoughts and ideas and bring about a change.
How can we save our environment from the carbon foot print of cut flowers?	A piece of floral art	Floral Art	Globalization and Sustainability	9	9	9	27	This piece of aesthetic and environment friendly floral art will use plant material in its creation and will showcase that floral art can be created in ways that can save our environment from the carbon footprint of cut flowers.

Identify prior learning

- Exposure to floral art
- Attending floral exhibitions
- MYP Subject Art (elements and principles of art)
- MYP subject Design (ACCESSFM)
- MYP Subject Business – understand product life cycle of cut flowers

APPENDIX D -CRITERIA (14th to 15th August 2020)

Criteria

Goal	To create a piece of aesthetic and environment-friendly floral art using plant material, to represent Eastern culture and traditions			
Context	Globalization and sustainability			
	Aesthetics	Functionality	Sustainability Content	Audience
1-2 Limited	i) The art is hardly visually appealing and does not catch the viewer’s attention. ii) Poor use of color combinations. iii) The art does not look balanced, rhythmic and harmonious.	i) The art hardly inspires floral artists to create eco-friendly and sustainable art. ii) Demonstrates limited development of skills and techniques to create the art. iii) Demonstrates limited exploration of ideas and creative thinking. iv) The art hardly represents an Eastern culture.	i) The materials used to create the art are hardly eco-friendly and sustainable (the calculated carbon footprint of the floral art is 30 -40% less than if flowers were used). ii) Hardly any variety of eco-friendly materials have been used to create the art (0 to 1 materials).	The art is targeted towards any individual.
3-4 Adequate	i) The art is mildly appealing visually. ii) Color combinations need improvement. iii) Balance, rhythm and harmony need improvement.	i) The art somewhat inspires floral artists to create eco-friendly and sustainable art. ii) Demonstrates adequate development of skills and techniques to create the art. iii) Demonstrates adequate exploration of ideas and creative thinking. iv) The art somewhat represents an Eastern culture.	i) The materials used to create the art are somewhat eco-friendly and sustainable (the calculated carbon footprint of the floral art is 41- 60% less than if flowers were used). ii) An adequate variety of eco-friendly materials have been used to create the art (2 to 3 materials).	The art is targeted towards any artists.
5-6 Substantial	i) The art is substantially appealing visually. ii) Color combinations are substantially pleasing and appropriate. iii) There is substantial balance, rhythm and harmony in the art.	i) The art substantially inspires floral artists to create eco-friendly and sustainable art. ii) Demonstrates substantial development of skills and techniques to create the art. iii) Demonstrates substantial exploration of ideas and creative thinking. iv) The art substantially represents an Eastern culture.	i) The materials used to create the art are substantially eco-friendly and sustainable (the calculated carbon footprint of the floral art is 61-80% less than if flowers were used). ii) A substantial variety of eco-friendly materials have been used to create the art (4 to 5 materials).	The art is targeted towards floral artists.
7-8 Rigorous	i) The art is extremely appealing visually. ii) Color combinations are excellent and extremely pleasing. iii) There is excellent balance, rhythm and harmony in the art.	i) The art is extremely inspiring to floral artists to create eco-friendly and sustainable art. ii) Demonstrates excellent development of skills and techniques to create the art. iii) Demonstrates excellent exploration of ideas and creative thinking. iv) The art is an excellent representation of an Eastern culture.	i) The materials used to create the art are extremely eco-friendly and sustainable (the calculated carbon footprint of the floral art is 81-100% less than if flowers were used). ii) An excellent variety of eco-friendly materials have been used to create the art (more than 5 materials).	The art is targeted towards floral artists who care about the environment and are willing to make a change.

Started on 17th August 2020: -

ACTION PLAN (APPENDIX E of Report)

Objective/Action	Priority	Deadline	Status	Start Date	End Date	Duration
Criterion A -Investigating						
Make summary of important information from handbook and teacher’s instructions in process journal	Medium	30/4/20	Complete	26/4/20	26/4/20	1 day
Brainstorm to come up with project ideas of my interest, and document the thoughts in process journal.	Medium	30/4/20	Complete	27/4/20	27/4/20	1 day
Shortlist 3-4 ideas and conduct preliminary research on these ideas. Document the same in process journal.	Medium	5/5/20	Complete	28/4/20	28/4/20	1 day
Select a viable idea by creating a topic evaluation chart. Identify the global context for the chosen idea. Document in process journal.	High	6/5/20	Complete	29/4/20	29/4/20	1 day
Develop a clear inquiry question.	High	7/5/20	Complete	30/4/20	30/4/20	1 day
Based on the inquiry question, define a clear goal.	High	7/5/20	Complete			
Based on the goal, come up with feasible product ideas	Medium	7/5/20	Complete			
Finalize a product idea	High	7/5/20	Complete			
Create Appendix for report, as evidence for brainstorming process.	High	30/5/20	Complete	20/5/20	20/5/20	1 day
Identify and discuss prior learning and knowledge on chosen topic	Medium	30/7/20	Complete	15/7/20	15/7/20	1 day
Carry out in depth research on the chosen topic. Create Appendix for report, as evidence for research.	High	15/8/20	Complete	1/8/20	10/8/20	10 days
Address ATL skills used in Criterion A (including ATL skill of information and media literacy); include in process journal and report	High	30/9/20	Complete	13/9/20	13/9/20	1 day
Interview International vice chairperson of WFC	High	5/10/20	Complete	2/10/20	2/10/20	1 day
Write Section A of the report	High	5/10/20	Complete	3/10/20	4/10/20	2 days
Meet supervisor to discuss progress	High	14/10/20	Complete	14/10/20	14/10/20	1 day
Submit Criterion A	High	15/10/20	Complete	15/10/20	15/10/20	
Criterion B -Planning						
Identify criteria to assess the success of the product	High	30/8/20	Complete	14/8/20	15/8/20	2 days
Define Limited, Adequate, Substantial and Rigorous strands for each attribute	High		Complete			
Complete the criteria (rubric) chart (Include as Appendix in process journal and report)	High		Complete			
Create an action plan for the entire project (Include as Appendix in process journal and report)	High	15/2/21	Complete	17/8/20	10/2/21	N.A.
Address ATL skills used in Criterion B (including ATL skill of self-management); include in process journal and report	High	1/11/20	Complete	25/10/20	25/10/20	1 day
Meet supervisor to discuss progress	High	2/11/20	Complete	27/10/20	27/10/20	1 day
Create appendix as evidence for demonstrating self-management skills & include in report	High	2/11/20	Complete	1/11/20	2/11/20	2 days
Write Section B of the report	High	2/11/20	Complete	1/11/20	2/11/20	2 days
Submit Section B	High	5/11/20	Complete	5/11/20	5/11/20	
Criterion C- Taking Action						
Gather materials (for all 3 components of the art- the hair accessory; the landscape; the turmeric art)	Medium	15/11/20	Complete	10/11/20	11/11/20	2 days
Create the art (all three components)	High	3/12/20	Complete	12/11/20	1/12/20	20 days
Record the process used to complete the art in the process journal & include as appendix for report	Medium	30/11/20	Complete	29/11/20	29/11/20	1 day
Show evidence of completed product in report (all 3 components of the floral art)	High	10/2/21	Complete	8/2/21	8/2/21	1 day
Take an opinion of a flower expert on my art (Record findings in process journal).	Medium	3/12/20	Complete	30/11/20	30/11/20	1 day
Create appendix as evidence of research skills, self-management skills, thinking skills, social skills and communication skills for Criterion C	High	3/12/20	Complete	30/11/20	3/12/20	4 days
Write Section C of the report	High	2/12/20	Complete	1/12/20	1/12/20	1 day
In the report, demonstrate the link between the floral art and the defined goal and global context of Globalization and Sustainability	High	2/12/20	Complete	1/12/20	1/12/20	1 day
Address ATL skills used in Criterion C (including ATL skills of thinking, communication, and social skills); include in process journal and report	High	2/12/20	Complete	1/12/20	1/12/20	1 day
Meet supervisor to discuss progress	High	15/2/21	Complete	15/2/21	15/2/21	1 day
Submit Section C	High	6/12/20	Complete	6/12/20	6/12/20	
Criteria D- Reflecting						
Get feedback on the product from floral expert (include in process journal)	High	31/12/20	Complete	15/12/20	15/12/20	1 day
Evaluate the product against the defined attributes in the rubric / criteria chart (create Appendix “Criteria Feedback Record” and include in report	High	31/12/20	Complete	20/12/20	20/12/20	1 day
Complete reflection on how implementation of this project has increased my knowledge of the topic and of the global context of sustainability.	High	5/1/21	Complete	1/1/21	1/1/21	1 day
Complete reflection on my growth as an IB learner, as a result of this project	High	5/1/21	Complete	1/1/21	1/1/21	
Write Section D of the report	High	5/1/21	Complete	1/1/21	1/1/21	
Submit Section D	High	17/1/21	Complete	17/1/21	17/1/21	
Complete Appendices						
Select maximum 10 extracts from process journal. Put these in the appendices.	High	10/2/21	Complete	2/2/21	3/2/21	2 days
Bibliography						
Cite all sources used in MLA 8 format & include in text citations in report	High	25/1/21	Complete	20/1/21	20/1/21	1 day
Create a “Works Cited” page in alphabetical order and include in process journal and report	High	25/1/21	Complete	21/1/21	22/1/21	2 days
Evaluate reliability of sources using OPVL and include in Appendix for report	High	25/1/21	Complete	24/1/21	25/1/21	2 days
Exhibition Preparation						
Create poster / presentation to display for the exhibition	Medium					2 days
Present the project at the exhibition	High					
Submit final report	High	21/2/21	Complete	21/2/21	21/2/21	

RESEARCH PLAN (Include in **Appendix B** of Report)

Question	Answer	Research Type	Citation
How can you assess the carbon footprint created by using cut flowers?	'Life Cycle Analysis' is a tool used for evaluating the environmental impacts of the entire life cycle of products and processes. When applied to the life-cycle of cut flowers, it is found that transport, heating, and electricity, are the key carbon hotspots.	Scholarly Article	(Swinn)
What is the carbon foot print of a single flower?	Using a scientific method of calculation, it is assessed that cut flower productions can have carbon emissions as high as 3 kg CO ₂ per flower. A large proportion of these emissions can be attributed to heating greenhouses with fossil fuels such as natural gas.	Blog	("The Environmental impacts of the cut-flower industry")
What is the problem with carbon emissions? Why is it harmful?	According to the union of Concerned Scientists, CO ₂ emissions have been the main reason for climate change since the 1 st half of the 18 th century. Unlike other contaminants, CO ₂ remains in the atmosphere for thousands of years.	Blog	("The Environmental impact of the cut-flower industry")
Is the idea of creating floral art without using fresh cut flowers, likely to work?	Yes, people are becoming increasingly aware of making choices that are not detrimental to the environment. This means that alternative solutions will be welcomed with an open mind, as long as they serve the aesthetic purpose.	Interview	(Chesdmethee)
How can I plan and organize possible materials that I need to create my floral art?	3 lists can be created for the materials: the "X-List", the "Grey List", and the "Positive List". The X-List should contain the materials which are likely to cause fatal conditions in humans, and should be eliminated right away. For floristry, foam (formaldehyde) will be at the top of the X-List. It also includes plastics and cellophane. Materials on the Grey List are harmful, but not as critical as the X-list, so they can be phased out slowly (e.g. glue; coated non-rust wire). Materials on the P-List are those which are safe and do not pose a threat (e.g. copper wire, sand, moss, paper, and bio-degradable materials).	Book	(McDonough)
Is it potentially limiting to not be able to use fresh cut-flowers?	No, it is not a limiting factor at all. The idea is to completely re-invent the entire process in such a way that entirely new materials are concepts are used. These should have a high aesthetic appeal, only then they will truly be a real alternative. If the aesthetics are successful in promoting a sense of well-being, then people will be quick in taking to it.	Website	(Amanda)
What sustainable plant material can I use which has lower carbon foot print than cut flowers?	1) Pumpkin seeds can be used for the floral art: - The carbon footprint of pumpkin is 0.14 kg CO ₂ for 1 kg of pumpkins; while the average carbon foot print of flowers is 120 kg CO ₂ for a kg of flowers. So, the difference is massive.	Blog	(Pumpkin Seeds)
	2) Mustard seeds can be used for the floral art: - The carbon footprint of mustard seeds is 2.9kg CO ₂ for 1 kg mustard seeds, while the average carbon foot print of flowers is 120 kg CO ₂ for a kg of flowers. So, the difference is massive.	Website	Carbon footprints of foods list)
	3) Sago can be used for the floral arrangement: -The carbon footprint of sago is 0.1 kg CO ₂ for 1 kg sago, while the average carbon foot print of flowers is 120 kg CO ₂ for a kg of flowers. So, the difference is massive.	Scholarly article	(Yasuf)
	4) Lotus seeds can be used. They are sustainable as they are hand-farmed and no machinery is used in the process, thus reducing the carbon footprint.	Website	(Jachec)
	5) Black preserved moss can be used: - Preserved moss is natural moss that is no longer alive and has been carefully preserved through an eco-friendly process.		(Everything You Wanted to Know about Preserved Moss)
	6) Whole turmeric : - the carbon footprint is 0.4 kgs. CO ₂ for 1 kg turmeric; so it is much lower carbon footprint than flowers.	Website	(Carbon footprints of foods list)
	7) Bay leaves : - carbon footprint is 1.6 kg. CO ₂ for 1 kg bay leaves so it is very low	Website	(Carbon footprints of foods list)
	8) Cardamoms : - carbon footprint is 1.6 kg CO ₂ for 1 kg cardamom so very low	Website	(Carbon footprints of foods list)
	9) Cinnamon sticks : carbon footprint is 1.6 kg CO ₂ for 1 kg cardamom so it is very low	Website	(Carbon footprints of foods list)
	10) Black pepper : - carbon footprint is 2.5. kgs. CO ₂ for 1 kg black pepper, so is a bit higher than the other materials, but still huge difference with flowers	Website	(Carbon footprints of foods list)
	11) Cumin seeds : - carbon footprint is 1.6 kgs. CO ₂ for 1 kg cumin seeds so it is very low	Website	(Carbon footprints of foods list)
	12) Cloves : - carbon footprint is 1.6 kg CO ₂ for 1 kg cloves so very low	Website	(Carbon footprints of foods list)
What Eastern culture can I represent through my floral art?	Adorning the hair lavishly with bejeweled ornaments is a part of Eastern culture and tradition since centuries. In India, hair adornment was one of the "Shola Shringar" or 16 adornments that enhanced a girl's beauty, and gave her a Goddess like aura. Component 1 of my floral art will be a look alike of a bejeweled hair accessory or <i>Keshapasharachana</i> , which is an Eastern treasure.	Website	(Solah Shringar)
	Component 2 of my floral art will be made of spices, to resemble a landscape. Component 3 will be made of whole turmeric. Both these components represent 'Eastern treasures' as the spice trade and its routes connecting ancient civilizations of the East have a rich history, and in the ancient days, the spice trade was so lucrative that spices were known as Eastern treasures. Even today, these spices, like turmeric, cardamom, clove, bay leaves, cinnamon, cumin seeds, etc. are considered as Eastern treasures due to their medicinal value, which is only studied and practiced in ancient Eastern medicinal practices like Ayurveda. The healing nature of spices can also be found in ancient Sanskrit texts.	Website	(Morais)

Approaches to learning used in the Research Plan:

I used **information literacy skills** to ensure that I chose a variety of sources, and made connections between them. Additionally, I used **Media literacy skills** to critically analyze the information contained in these sources. I also employed **critical thinking skills** to choose the most relevant information and discard information that is not required.

13th September 2020

ATL skills used in Criterion A

- Information literacy skills and Media Literacy Skills
 - Primary and secondary research
 - OPVL

- Social and communication Skills
 - Interview with floral expert

EVALUATING AND CITING SOURCES (include in Appendix C of Report): - (Started on 1/10/2020)

I used the **ATL's of information literacy skills and media literacy skills** to evaluate sources using OPVL and the reliability grid.

Evaluation of sources with help of Reliability Grid (Include in Appendix C of report)- keep updating as I go

	Interviewee	Origin	Objectivity	Quality	Quantity	TOTAL
Score=	4	3	2	3	2	14
Strengths	The strength of the interview lies in the fact that the interviewee is an expert in his field, and is a renowned international figure. This makes his statements trustworthy.					
Weaknesses	A hint of weakness may lie in the fact that because he is a high-profile figure in the floral designing industry, he may not want to promote the view of saying no to cut-flowers, as it may affect his industry.					

3/10/2020

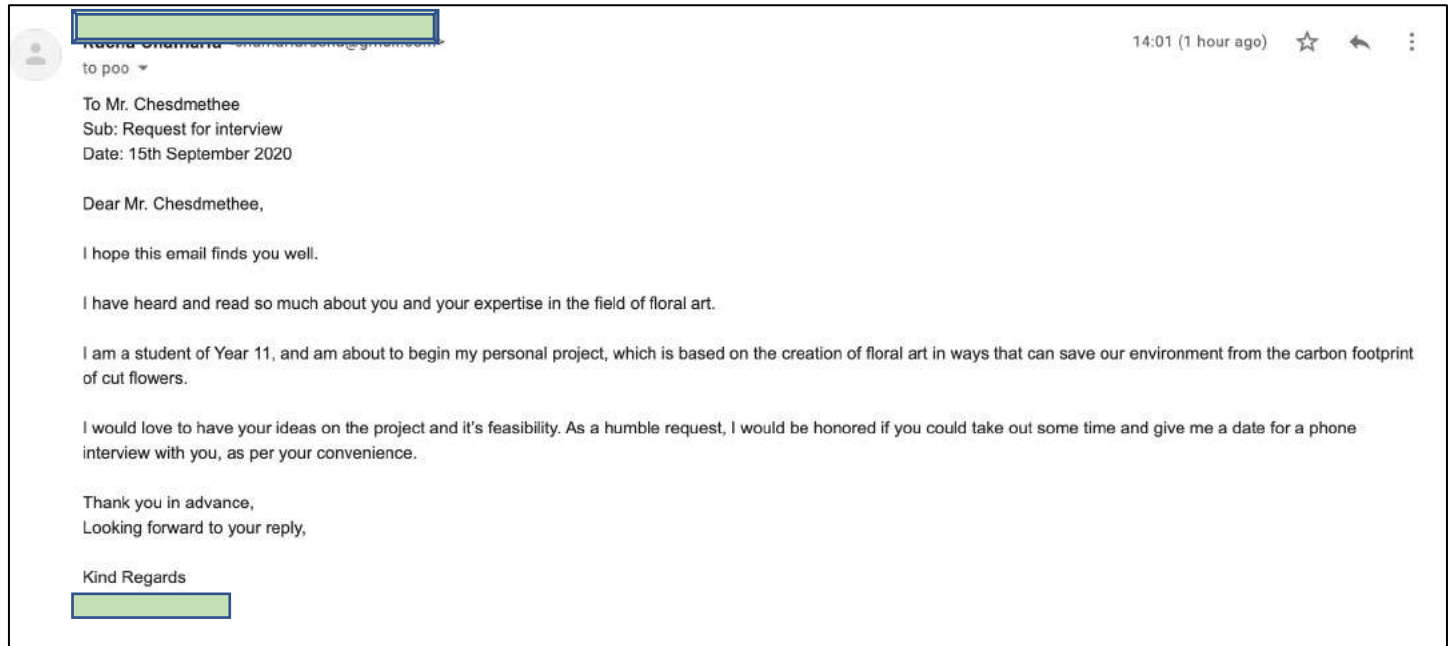
Source Evaluation OPVL (Origin, Purpose, Value, Limitation)- (include in Appendix C of report)

Research Type	MLA 8 citation	Origin	Purpose	Value	Limitation/ Author's bias
Primary (Interview)	Chesdmethee, Phubast. Interview. Conducted by student, 2 October 2020	Phubast Chesdmethee is the International Vice-Chairperson of WFC (World Flower Council) and recipient of the WFC Floral Nobel Prize.	The purpose of the interview was to gain the interviewee's opinion about the idea of creating sustainable floral art for exhibitions and whether it is likely to be accepted.	The source is useful, as it provides insight about my topic from an expert in the field.	The only limitation may be that due to the high profile of the interviewee, he may not want to promote the view of saying no to cut flowers, as it might affect his industry. Thus, his statements might have been made mildly.
Secondary (Website)	Amanda. "How Sustainable Is Floristry? ." British Academy of Floral Art, British Academy of Floral Art, 22 Feb. 2017, academyoffloralart.com/how-sustainable-is-floristry/.	This online article titled "How Sustainable is Floristry" is written by Amanda, and published on Feb 22 nd 2017, by 'The British Academy of Floral Art', which is a floristry school with an outstanding reputation for floristry.	The purpose is to inform readers what it means to be sustainable in the floral industry; and what florists should be doing to help the planet.	The source is useful, as it helps me to understand whether it is potentially limiting to not be able to use fresh cut flowers in my floral art. It provides motivation for creation of sustainable floral art, by a reputed organization.	It is limited by the fact that as the article has been created by the organization itself, it might be biased to the extent that it will portray itself in a positive light by depicting that it creates sustainable floristry.
Secondary (Blog)	"The Environmental Impact of the Cut-Flower Industry." Tree Nation, Tree Nation ASBL, 5 Feb. 2020, tree-nation.com/projects/inside-tree-nation/article/5956-the-environmental-impact-of-the-cut-flower-industry.	This blog post titled "The Environmental Impact of the cut- flower industry" has been written and published on 5 th Feb 2020, by "Tree Nation", which is a reputed European environmental non-profit organization.	The purpose is to explain to readers, that the intensive farming of fresh flowers is accompanied by a compelling environmental impact.	The source is of value, as it helped me to assess the carbon footprint of a single flower, and to understand why carbon emissions are harmful.	It is limited by the fact that since it is a European organization, the carbon costs calculated in the report are limited to European countries.

Secondary (Book)	Braungart, Michael, and William McDonough. <i>Cradle to Cradle: Remaking the Way We Make Things</i> . Vintage, 2019.	This book " <i>Cradle to Cradle: Remaking the Way we Make Things</i> " was written by authors William McDonough (a renowned German chemist); and Michael Braungart (a reputed US architect), and published by Vintage in 2019.	The purpose is to present to its readers, a synthesis of science and design, for the welfare of communities, through the use of safe materials.	The source is of value, as it inspired me to seek improvement in my designs, and helped me to organize my materials under the X-list, Grey List, and Positive List.	It is limited by the fact that the models suggested are very specific- this means that there is less flexibility, which makes it hard to make a product line diverse.
Secondary (Scholarly Article)	Yasuf, MA. "Potential of Traditional Sago Starch: Life Cycle Assessment (LCA) Perspective." IOP Conference Series: Materials Science and Engineering, iopscience.iop.org/article/10.1088/1757-899X/507/1/012014/pdf .	This article titled "Potential of Traditional Sago starch: Life Cycle Assessment (LCA) perspective" is written by M.A. Yasuf and published by IOP Publishing Ltd in 2018.	The purpose of this is to educate readers how LCA is used to determine the environmental impact of the sago industry.	I used sago for my floral art- this article is useful as it helped me to calculate the carbon footprint of sago, as compared to flowers.	It is limited to the extent that it is 3 years old; thus, the figures may have changed.
Secondary (Website)	"Solah Shringar." Hindu Bridal Adornments, Significance, www.culturalindia.net/weddings/wedding-traditions/solah-shringar.html .	This article titled "Solah Shringar" has been written and published by 'CulturalIndia.net'. This is one of India's leading online platforms, which provides details of India's culture.	The purpose is to inform readers of India's heritage, culture, and various traditions.	The source was of value to me, as it helped me to decipher the Eastern culture which I could use to represent my floral art- a bejeweled hair accessory called 'Keshapasharachana'.	It could be biased to the extent that being an Indian website, it will want to show Indian culture in a positive light.
Secondary (Scholarly article)	Swinn, Rebecca. "The Carbon Footprint of Flowers." <i>Flowers From the Farm</i> , Feb. 2019, www.flowersfromthefarm.co.uk/blog/the-carbon-footprint-of-flowers .	This thesis titled "The Carbon Footprint of Flowers" is written by Rebecca Swinn and published on 20 th Feb 2019, by 'Flowers from the farm' which is a multi-award winning, not for profit cooperative of British cut flower growers.	The purpose of the thesis is to use LCA as a tool to compare the carbon emissions from cultivation and transportation of 7 cut flowers in the U.K.	This source was of value to me as it helped me to understand how the carbon foot print created by using cut flowers can be assessed by using LCA as a tool.	It could be limited to the extent that the study, figures, and flowers are limited to the United Kingdom.
Secondary (Blog)	"Carbon Footprint of Foods List [Environmental Sustainability]." HEALabel, Healabel LLC, healabel.com/carbon-footprint-of-foods .	This online article titled "Carbon Footprints of food list" is created and published in 20121 by 'Healabel LLC', which is a conscious consumerism initiative.	The purpose is to inform its readers how their choice of purchases impacts the planet.	This source was of value to me as it gave me the carbon footprint of all the seeds I used in my floral art.	It could be limited to the extent that its creator is an individual, and not a reputed organization; thus, the accuracy of its figures is not known.
Secondary (Blog)	Morais, Rodolfo. "The Spice Trade : History of the Ancient Treasures of the East." <i>Grapes & Grains, Grapes and Grains</i> , 19 June 2017, www.grapesandgrains.org/2017/06/the-spice-trade-routes-and-history.html .	This online article titled "The Spice Trade: History of the Ancient Treasures of the East" is written by Morais Rodolfo, a traveler, writer and language enthusiast; and published on 19 th June 2017. by <i>Grapes and Grains</i> , which is an international community dedicated to culture.	The purpose is to educate readers about the history of spices of the Eastern world, and why they are known as Eastern treasures.	This source was of value to me as it helped me to decipher materials which would be a representative of Eastern treasures- spices like cardamom, clove, bay leaves, cumin seeds, turmeric etc.	Being a blog, it may lack the authenticity and professionalism that comes from literary sources.

15th September 2020: -

Evidence of request for interview with floral expert: -



2nd October:

Points to discuss in Interview with Phubast Chesdmenthee:

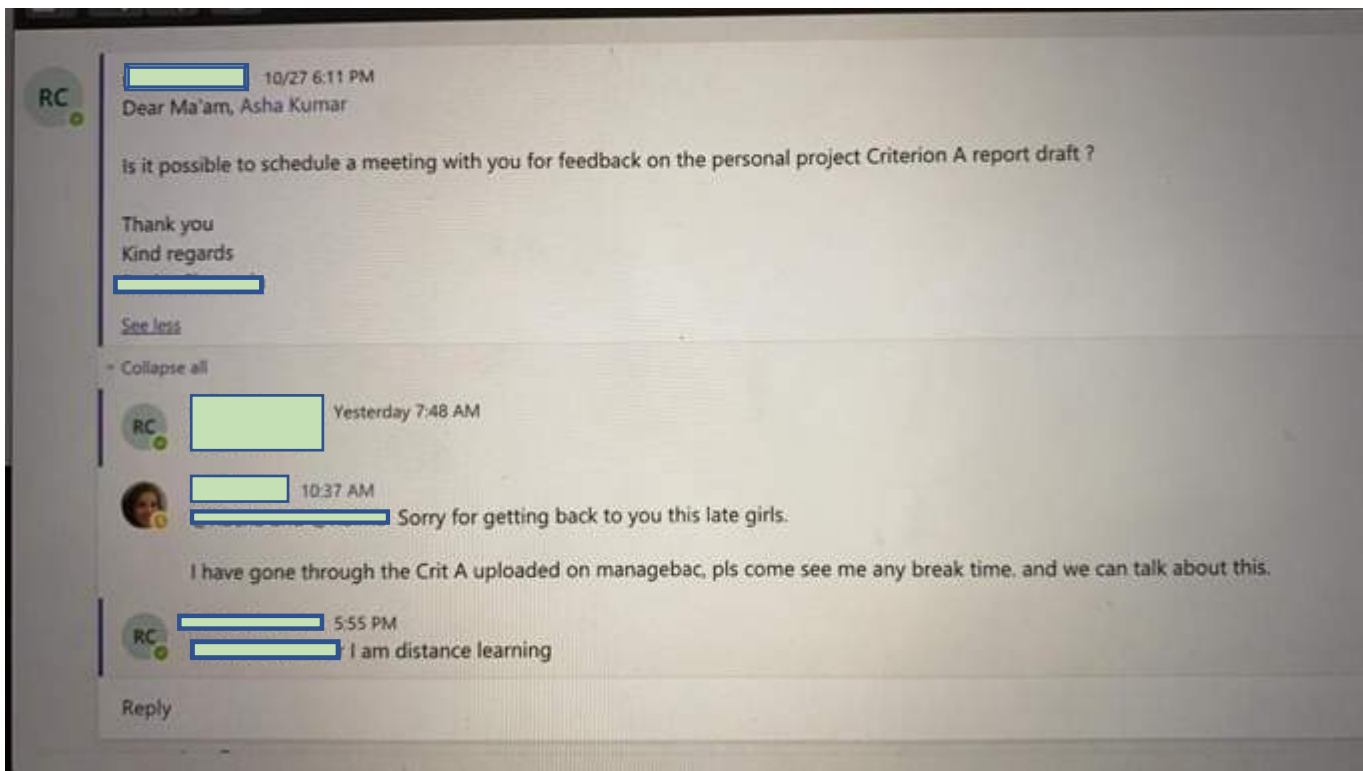
- Feasibility of creating sustainable floral art
- Whether it is likely to be accepted as a substitute
- Possible materials which can be used

MEETINGS / FEEDBACK WITH SUPERVISOR

- **14th October 2020: Meeting with supervisor**

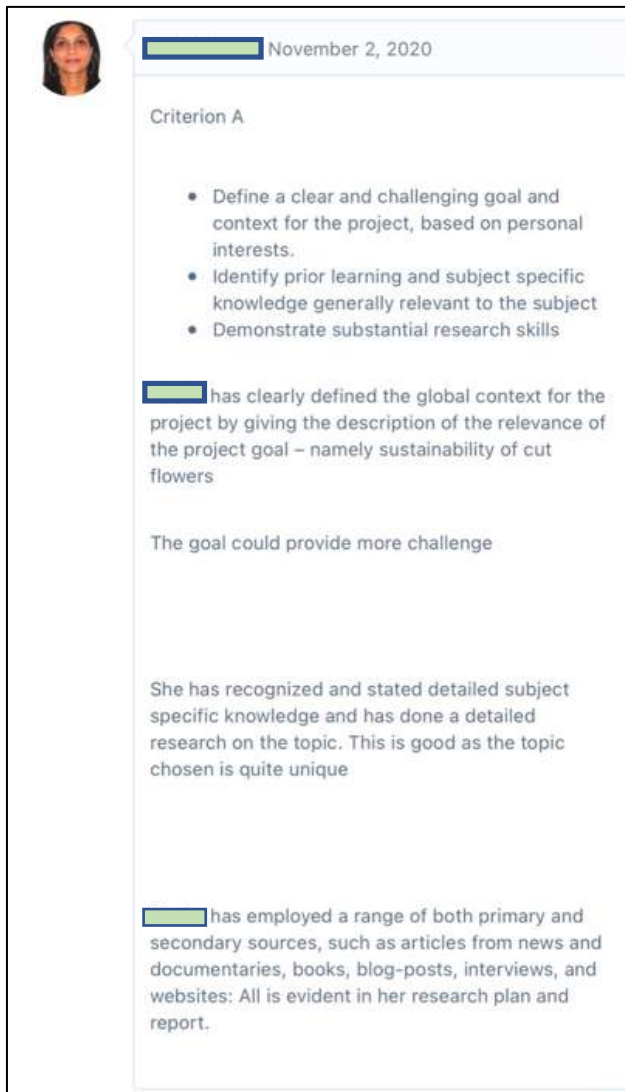
This was my first meeting with my supervisor in which I used the ATL's of social and communication skills to provide a summary of my project. My supervisor communicated to me that she would look at the first draft of Criterion A and get back to me with feedback.

- **27th October 2020: I requested for meeting; evidence is below: -**



2nd November 2020: -

Feedback received from supervisor on Criterion A draft: - (A screenshot as evidence): -



- 15th February 2021: Here is the evidence of communication: -

Feedback for Criterion C: -

February 15, 2021

Criterion C

i. create an excellent product/outcome in response to the goal, global context and criteria

_____ has created a superior visual art work that achieves the stated goal to a high standard in response to the global context

ii. Demonstrate excellent thinking skills

Show clear examples of how to evaluate solutions to problems, transfer and apply existing knowledge to generate new ideas.

iii. Demonstrate excellent communication and social skills

She has shown evidence of regular meetings with the supervisor and some action in response to supervisor feedback, demonstrating perseverance throughout the process.

Shown evidence of substantial communication skills by providing clear examples of using a variety of media, interacting with a variety of people, and showing respect in interactions

Feedback for Criterion D:-

February 15, 2021

Criterion D

i. Present a substantial evaluation of the quality of the product/outcome against his or her criteria

_____ has displayed an extensive evaluation of the quality of the product against most of the developed criteria including many examples of achievements and possible improvements

ii. Present substantial reflection on how completing the project has extended his or her knowledge and understanding of the topic and the global context

_____ has displayed a thoughtful reflection of how the project extended their personal knowledge and understanding of the chosen global context by including multiple examples of growth throughout the project

iii. Present substantial reflection on his or her development as an IB learner through the project.

_____ has displayed a thoughtful reflection of how the project helped growth as an IB learner by including some detailed examples of the development of IB learner characteristics throughout the project.

25th October 2020

ATL skills used in Criterion B

- **Organizational skills**

- Ensure timely work completion
- Marking tasks in action plan according to priority
- Keeping up to date with supervisor feedback and acting on it
- Ticking to do lists on managebac
- Creating my own to do lists

- **Affective skills**

- Ensure focus
- Don't let failures discourage
- Keep motivated

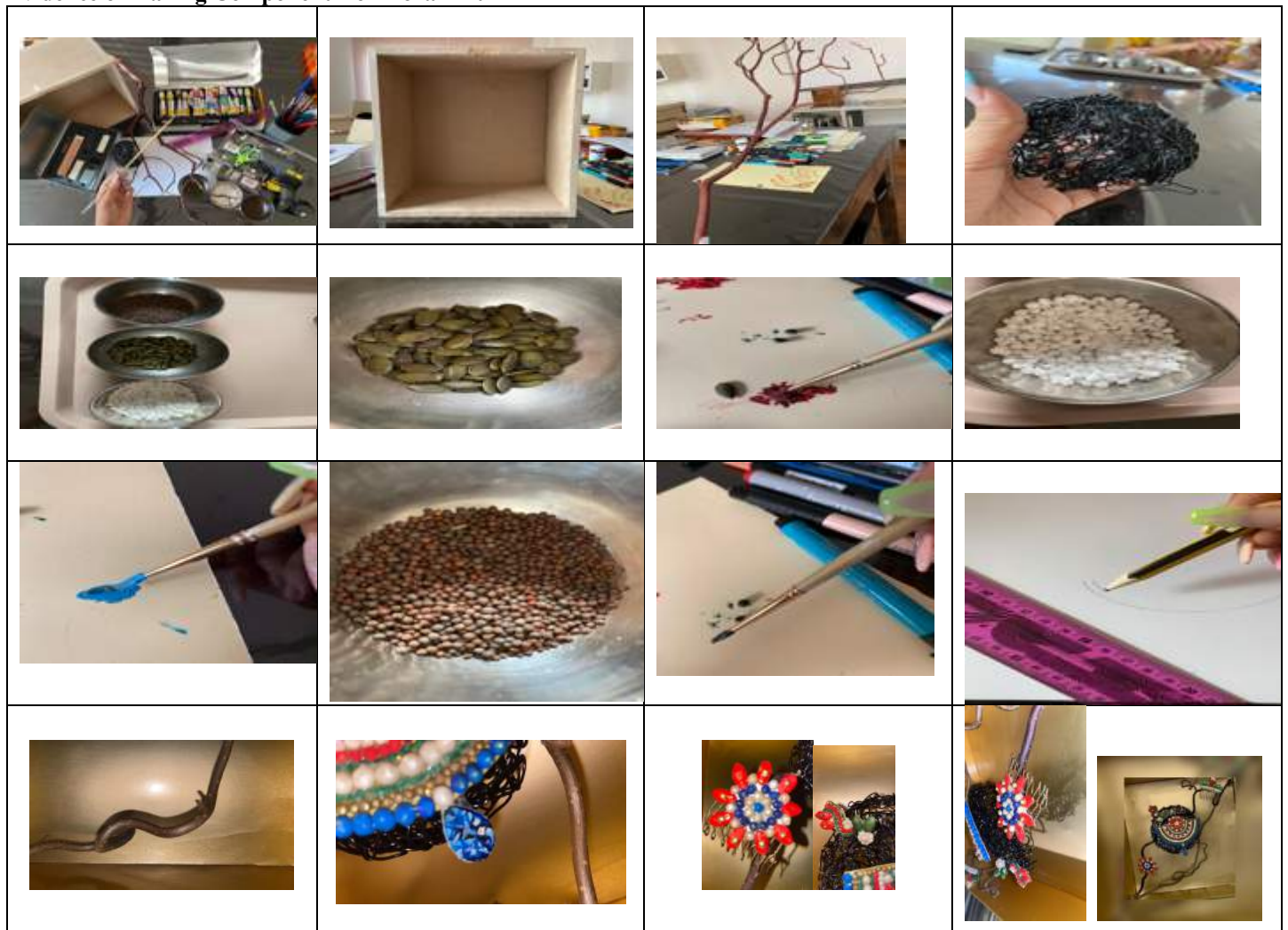
29th November 2020: -

Appendix F- Plan of Creation and Evidence of Component 1 of my Floral Art

Materials/ Tools	
Wooden box	Pumpkin Seeds
Gold spray paint	Mustard seeds
Organic nail polish of different colors	Sago seeds
Wooden branch of willow tree	Chart paper
Black wire	Glue gun
Pencil/ pen	Glue
Paint brush	Scissors
	Measuring tape

Method/ Procedure	
No.	
1	Take the wooden box and paint it gold with spray paint
2	Attach the willow tree branch diagonally to give it a two-dimensional look
3	Replicate a hair bun with black wire by making loops
4	Attach loop to the center of the branch to make it look like a lady's hair bun
5	Create the ornaments to go on the bun
6	Accurately draw the design on chart paper
7	Cut out the design with scissors
8	Paint the mustard seeds, sago seeds, and pumpkin seeds and color them by painting them with nail polish.
9	Stick the seeds on the design to make it look like semi-precious jewelry which Indian women adorn on their hair
10	Stick this on hair bun
11	Make few more ornaments using same process
12	Stick ornaments on branch

Evidence of making Component 1 of Floral Art

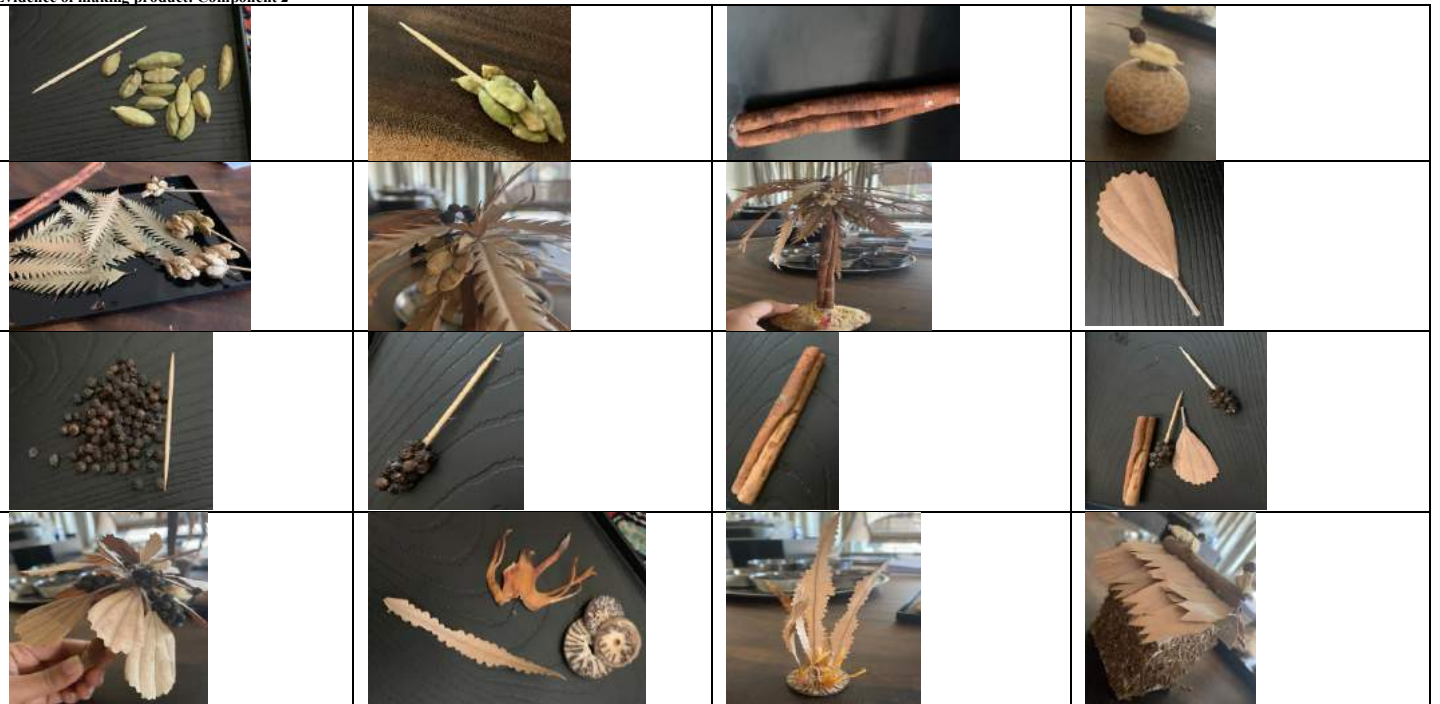


Appendix G- Plan of Creation and Evidence of Components 2 and 3 of my Floral Art

Materials/ Tools				
Component 2		Component 3		
Cinnamon stick	Beetle nuts	Bay leaves	Log of wood	Dried turmeric rhizomes
Cardamom	Cloves	Toothpicks	foam	Bay leaves
Mace	Black pepper	Cumin seeds	Mace	Pinking shears
Fennel	Scissors	Glue	Glue	Sharp knife
Chart Paper	Cardboard			

Method/ Procedure		
No.	Component 2	Component 3
1	For the big palm tree: Take 15 bay leaves	Using a sharp knife cut the wet foam into squares
2	Cut in a zig zag manner to replicate leaves	Rub or cut the squares into spheres of 3 different sizes that are 3, 4 and 5 cm at the base.
3	Make groups of cardamoms on toothpicks	Choose mature bay leaves and dry them between water absorbent paper (If dried in this way it will retain its color)
4	Attach all leaves on a cinnamon stick	Cut the leaves in half and round off each with pinking shears
5	Add a group of cardamoms on the sticks to replicate dates	Cut the top off with an angle so it will enter the foam easily
6	For the short palm tree: Cut bay leaves in a zig zag manner	Dip the tip of each stem in glue
7	Attach toothpicks on the leaves	Insert about 3 mm into the foam
8	Glue a bunch of black pepper on toothpicks	Overlap each placement slightly
9	Attach the cut leaves and toothpicks onto the cinnamon stick	Make whirls of leaves working from the base upwards in 3 layers
10	For the small cacti plant: Cut bay leaves in a zig zag manner	Take the mace and dip the end of each piece in glue and adhere to the sphere in the center of the flower.
11	Take a slice of beetle nut	Paste dried turmeric rhizomes for the base on the log
12	Attach the cut leaves onto the beetle nut	Display and stick the completed flowers on the log covered with dried turmeric
13	Stick mace on the beetle nut	
14	For the house: Cut chart paper and fold it in a rectangular manner for the base of the house	
15	Stick some cumin seeds on the base of the house	
16	On the top of the house give a shape of the roof with cardboard	
17	Cut bay leaves in a zig zag manner to resemble hay	
18	Glue the cut leaves onto the roof of the house made with cardboard in 2 layers	
19	Glue a stick of cinnamon on the top of the roof horizontally to replicate a brick	
20	Make birds with cardamom to replicate the body and black pepper to replicate the face and put it on top of the roof.	
21	For the fence: Cut strips of cinnamon sticks in both small and big pieces and attach it to each other to replicate a fence. Also use cloves to replicate a pathway.	

Evidence of making product: Component 2



Evidence of making product: Component 3




**Calculation of carbon footprint of my floral art, and comparison with carbon footprint of fresh flowers
(Include in Appendix H of report)**

Component 1 (hair accessory)			
Material	Quantity used in floral art (y)	Carbon footprint for 1 kg of material (z)	Carbon footprint for quantity used (y x z)
Pumpkin seeds	5 grams= 0.005 kgs.	0.14 kgs.	0.0007 kgs.
Sago	5 grams= 0.005 kgs.	0.1 kg.	0.0005 kgs.
Mustard seeds	2 grams= 0.002 kgs.	2.9 kgs.	0.0058 kgs.
Wooden box	500 grams= 0.5 kgs.	0.5 kgs.	0.25 kgs.
Copper wire	0.14 kgs.	0.2 kgs.	0.028 kgs.
Total carbon footprint for Component 1			0.285 kgs.
Component 2 (landscape)			
Coriander seeds	20 grams = 0.02 kgs.	1.6 kgs.	0.032 kgs.
Fennel seeds	15 grams = 0.015 kgs.	1.6 kgs.	0.024 kgs.
Clove	10 grams= 0.01 kgs.	1.6 kgs.	0.016 kgs.
Cumin seeds	15 grams = 0.015 kgs.	1.6 kgs.	0.024 kgs.
Cinnamon stick	40 grams= 0.04 kgs.	1.6 kgs.	0.064 kgs.
Whole black pepper	25 grams = 0.025 kgs.	2.5 kgs.	0.06 kgs.
Cardamom	12 grams= 0.012 kgs.	1.6 kgs.	0.01 kgs.
Bay leaves	10 grams= 0.01 kgs.	1.6 kgs.	0.02 kgs.
Black lentils	40 grams= 0.04 kgs.	0.9 kgs.	0.04 kgs.
Betel nuts	10 grams= 0.01 kgs.	2.3 kgs.	0.02 kgs.
Total carbon footprint for Component 2			0.3 kgs.
Component 3 (turmeric floral art)			
Turmeric	1 kilogram	0.4 kgs.	0.4 kgs.
Bay leaves	10 grams= 0.01 kgs.	1.6 kgs.	0.02 kgs.
Log of wood	1 kilogram	0.5 kgs.	0.5 kgs.
Foam	0.9 kgs.	4.8 kgs.	4.3
Total carbon footprint for Component 3			5.2 kgs.
<p>A minimum of two dozen flowers would be used for each of the above components of floral art weighing roughly 240 gm= 0.2 kgs. for each component. Carbon footprint of 1 kg. flowers is 120 kgs. Thus, the carbon footprint of two dozen flowers is 24 kgs. which is 8000% more than Component 1; 7900% more than Component 2; and 361% more than Component 3. This shows that by using natural plant material instead of fresh cut flowers, the carbon footprint of floral art can be reduced drastically.</p>			

Appendix I- Evidence and Reflection of Approaches to Learning (ATL Skills)

Research skills



Water footprint: likely low, 336 liters of water used to produce 1 kilogram of pumpkins / **40 gallons** of water used to produce 1 pound of pumpkins, pumpkin seeds likely have a relatively low water footprint.

Carbon footprint: likely low, 0.1 kg CO2e to produce 1 kilogram or 2.2 pounds of fresh pumpkins, a car driving equivalent of **0.5 miles or 0.75 kilometers**, USA market data, pumpkin seeds likely have a relatively low carbon footprint.

Information and Literacy Skills-
Recording and collecting research of various plant material to assess their carbon foot print. Looking at various options of plant materials which can be used. Watching videos of how designers use plant material in their designs

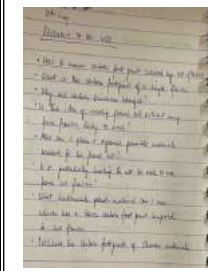
I used the ATL of information literacy skills and media literacy skills to choose sources using OPVL and the reliability of the sources.

Source	Reliability	Originality	Depth	Quality	Quantity	Timeliness
1. The strength of the information literacy skills (Information literacy skills) and media literacy skills (Media literacy skills) to choose sources using OPVL and the reliability of the sources.	High	High	High	High	High	High

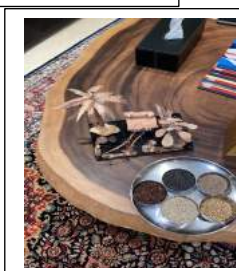
Media Literacy Skills- Evaluating the sources using OPVL, which defines the purpose, value, and limitation of each source. This enabled me to choose sources based on reliability. I used both primary and secondary sources.

Self-Management Skills


Organizing by creating to-do lists




Organizing materials



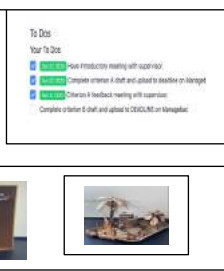
Affective Skills- practicing resilience when my design was faulty



Reflecting upon my solution and to what extent it achieved its purpose



Organizing by checking to do lists on Managebac



Thinking Skills

Critical thinking to break down the art work into logical steps



Creative thinking to create original Ideas and works: Creation of hair bun

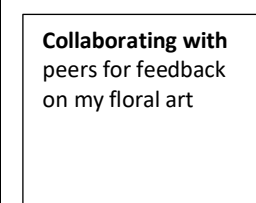


Transfer Skills- I made connections with my MYP visual art knowledge of elements and principles of art for my creation: Which shape of branch will bring harmony to my piece?

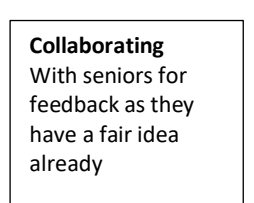


Social Skills

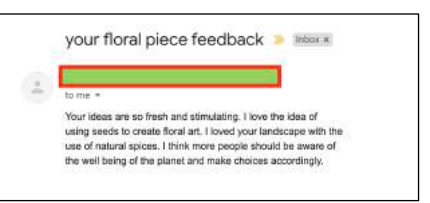
Collaborating with peers for feedback on my floral art



Collaborating With seniors for feedback as they have a fair idea already

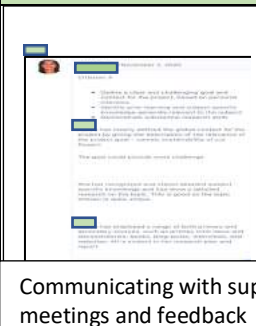


your floral piece feedback

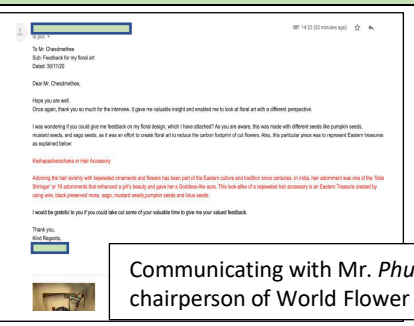


Communication skills


Communicating with supervisor to request for meetings and feedback



Communicating with Mr. Phubast Chesdmethe, International Vice chairperson of World Flower Council

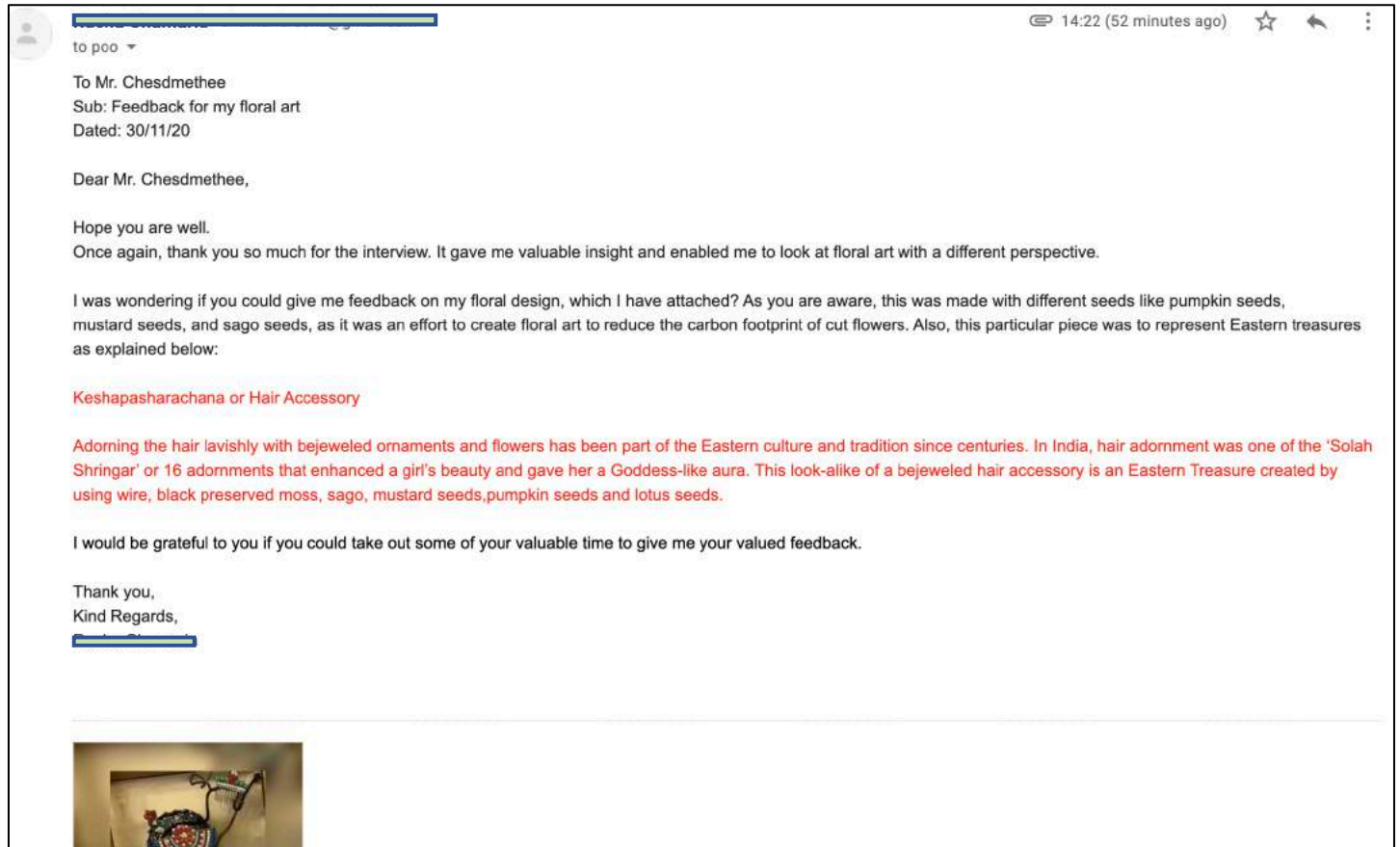


Communicating with Mr. Phubast Chesdmethe, International Vice chairperson of World Flower Council



30th November:

Evidence of request for feedback from floral expert: -



1st December 2020

ATL skills used in Criterion C

Thinking skills

- *Critical Thinking*
 - To conduct experiments with different materials of low carbon foot print
 - Combine information gathered from research and take informed decisions
 - Break down process of creation into logical steps
 - Combine different parts of the art into a design
- *Creative thinking*
 - Experimenting with different ideas
- *Transfer skills*
 - Make connections with visual arts knowledge to create a harmonious design

Communication and Social skills

- Communication with supervisor
- Communication with floral expert Phubast
- Social skills by collaborating with seniors and peers
- Social skills by interacting with audiences in floral art exhibitions

15th December 2020

Feedback from flower expert Phubast Chesdmenthee

- The art is extremely appealing visually
- Colors are in harmony
- Excellent variety of sustainable materials have been used
- A variety of interesting techniques used for creation
- To convince floral artists to switch to sustainable materials, you might want to create some options in the traditional style too- in vases.

Appendix J- Evaluation against criteria

	Aesthetics	Functionality	Sustainability Content	Audience
5-6 Substantial	i) The art is substantially appealing visually. ii) Color combinations are substantially pleasing and appropriate. iii) There is substantial balance, rhythm and harmony in the art.	i) The art substantially inspires floral artists to create eco-friendly and sustainable art. ii) Demonstrates substantial development of skills and techniques to create the art. iii) Demonstrates substantial exploration of ideas and creative thinking. iv) The art substantially represents an Eastern culture.	i) The materials used to create the art are substantially eco-friendly and sustainable (the calculated carbon footprint of the floral art is 61-80% less than if flowers were used). ii) A substantial variety of eco-friendly materials have been used to create the art (4to 5 materials).	The art is targeted towards floral artists.
7-8 Rigorous	i) The art is extremely appealing visually. ii) Color combinations are excellent and extremely pleasing. iii) There is excellent balance, rhythm and harmony in the art.	i) The art is extremely inspiring to floral artists to create eco-friendly and sustainable art. ii) Demonstrates excellent development of skills and techniques to create the art. iii) Demonstrates excellent exploration of ideas and creative thinking. iv) The art is an excellent representation of an Eastern culture.	i) The materials used to create the art are extremely eco-friendly and sustainable (the calculated carbon footprint of the floral art is 81-100% less than if flowers were used). ii) An excellent variety of eco-friendly materials have been used to create the art (more than 5 materials).	The art is targeted towards floral artists who care about the environment and are willing to make a change.

Justification for assigned grades:

- **Aesthetics:** The art has a visual appeal and is eye-catching as it looks interesting and different, and arouses curiosity in the viewer. Feedback by floral expert Phubast Chesdmethee, also stated that the art is extremely appealing visually. The turmeric art uses only three colors, which brings out the beauty of the natural color of turmeric. The landscape uses earthy colors and is in complete harmony (please see **product screenshots** at end of report). However, there is no end to perfection in art, and as a novice, I don't see how I can grade myself with the top grades for strands ii and iii of aesthetics.
- **Functionality:** The bold colors have been chosen to represent a hair accessory in Eastern culture, and plays the part quite well. Similarly, the landscape and the turmeric art use eastern spices, representing eastern culture well. The compelling structures stimulate the viewer and show technique and creative thinking. Although the materials used would engage an artist to be interested in sustainable art; I think I would need to create an option in the traditional style too (in a vase), as suggested by floral expert Chesdmethee. This would be appropriate for a more orthodox audience.
- **Sustainability content:** I think I can safely grade this at 7, as it matches the numeric criteria. The calculated carbon footprint is up to 8000% less than if flowers were used, and not just 81 to 100%, (please see **Appendix H** for calculations). Additionally, 15 sustainable materials have been used for my art (see **Appendix H**). The criteria mentions use of more than 5 materials, so this has been achieved.
- **Audience:** The art is clearly targeted towards floral artists who care about the environment and are willing to make a change. The fact that fresh flowers are not used, are in itself a testimony for this. It would take a person who cares about the environment to take to using seeds to create floral art.

Improvements for next time:

Functionality: Create an option in the traditional style too (in a vase), for audiences who are more orthodox in their creations.

1st Jan 2021

Reflection on how completion of project enhanced knowledge and understanding of topic and global context

- Increase my knowledge of visual art and product design
 - Learnt about art techniques, materials, and color schemes through interactions in exhibitions
 - Learnt about different designs through research
- Increase my understanding of Globalization and Sustainability
 - How to calculate carbon footprint
 - Increased awareness of eco-friendly materials
 - the surprising conclusion that there is a 3000% difference in the carbon footprint by using sustainable materials as opposed to fresh cut flowers

Reflection on development as an IB learner

- inquirer
 - developed skills to make an inquiry into the question “Can floral art be created in ways that can save our environment from the carbon footprint of cut flowers?”
 - primary research skills – interview
 - secondary research – learnt about sustainable material and carbon footprints
- thinker
 - critical and creative thinker- used knowledge of carbon footprints etc. to figure out how to implement the floral art
- reflective
 - reflected on ideas from experts
 - reflected on strengths and weaknesses of different materials
 - reflected on my work while trying to improve it
 - reflected on my outcome to give myself a fair grade

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I used the **ATL of information literacy skills** to reference accurately and construct a bibliography according to MLA 8 conventions.