

Design Thinking for Grades 9

Assessment Matrix:

Module 1.0: Documentary Photography

Achievement Levels	1-2 BEGINNING	3-4 DEVELOPING	5-6 PROMISING	7-8 PROFICIENT	9-10 EXCELLENT
Task 1.1 Points of View important aspects/principles of photography	The student: Is yet to show principles or elements. Displayed no efforts to make appropriate decisions while shooting.	The student: Hardly use any principles or elements. Made little effort in regard to decision making.	The student: Demonstrated few examples of principles and elements. Displayed some efforts in regard to decision making.	The student: Demonstrated fairly good examples of principles and elements. Displayed a decent effort in regard to decision making	The student: Demonstrated strong evidence of principles and elements. Displayed a clear effort in regard to decision making (Composition, Rule of third, interesting angles, etc.)
Task 1.2 Capture Expressions with composition and focus on a subject	Yest to photograph anything. Most compositions were not satisfactory and/ or completed.	Images barely represented assignment focus. Some compositions were not satisfactory and/ or completed.	Images somewhat represented assignment focus. A satisfactory composition that is creative and original. Most components of the task completed.	Images mostly represented assignment focus. A good composition that is creative and original. All components of the task completed.	All images clearly represented assignment focus. An Excellent composition that is creative and original. All components of the task completed with thoughtfulness and detail.
Task 1.3 Capture the essential elements of the story	Work displays minimal purposeful relationships between idea, imagery, form, media and skills.	Work shows sufficient capability in choosing appropriate imagery, form, media and techniques in support of creative intent.	Visual representation demonstrates a successful combination of imagery, form, media and techniques in support of creative intent.	Visual representation exhibits a distinctive blend of individual perspective, imagery, form, media and techniques in support of creative intent.	Visual representation embodies an excellent unity of original thought, imagery, form, media and techniques in support of creative intent.
Overview: Understanding and Knowledge of the topic	Less or no understanding and knowledge of their selected focus	Limited understanding and knowledge of their selected focus	Evidence of satisfactory understanding and knowledge of their selected focus	Evidence of good understanding and knowledge of their selected focus	Evidence of extensive understanding and knowledge of their selected focus

Design Thinking for Grades 9
Assessment Matrix:
Module 2.0: Fundamentals of 2D

Achievement Levels	1-2 BEGINNING	3-4 DEVELOPING	5-6 PROMISING	7-8 PROFICIENT	9-10 EXCELLENT
Task 2.1a, 2.1b. 2.1c Understanding the elements of 2D Design	The student: Needs to understand the basic elements of 2D design	The student: Possesses a vague understanding of the basic elements of 2D design	The student: Possesses a limited understanding of the basic elements of 2D design	The student: Possesses clear understanding of the basic elements of 2D design	The student: Possesses detailed understanding of the basic elements of 2D design
Task 2.2a, 2.2b Negative and Positive Spaces in Composition + Listing of Symmetry at home	The 2 compositions of representing 'Negative Spaces' in the environment as well as listing of symmetry at home are yet to be done.	The 2 compositions of representing 'Negative Spaces' in the environment as well as listing of symmetry at home were just about done.	The 2 compositions of representing 'Negative Spaces' in the environment as well as listing of symmetry at home was somewhat done.	The 2 compositions of representing 'Negative Spaces' in the environment as well as listing of symmetry at home were fairly done well.	The 2 compositions of representing 'Negative Spaces' in the environment as well as listing of symmetry at home were done well.
Task 2.3a. 2.3b Structure in 2D Design	The exploration of 2 tessellating patterns design process as well as the drawing of a Golden Spiral was done well.	The exploration of 2 tessellating patterns design process as well as the drawing of a Golden Spiral was just about done.	The exploration of 2 tessellating patterns design process as well as the drawing of a Golden Spiral was somewhat done.	The exploration of 2 tessellating patterns design process as well as the drawing of a Golden Spiral was fairly done well.	The exploration of 2 tessellating patterns design process as well as the drawing of a Golden Spiral was done well.
Task 2.4a. 2.4b Visual Studies and Graphicalisation	The 3 variations of the chosen state symbol as sketches as well as the 3 variations of the chosen state symbol as Icons/Symbols are yet to be done	The 3 variations of the chosen state symbol as sketches as well as the 3 variations of the chosen state symbol as Icons/Symbols were just about done	The 3 variations of the chosen state symbol as sketches as well as the 3 variations of the chosen state symbol as Icons/Symbols were somewhat done	The 3 variations of the chosen state symbol as sketches as well as the 3 variations of the chosen state symbol as Icons/Symbols were fairly done well	The 3 variations of the chosen state symbol as sketches as well as the 3 variations of the chosen state symbol as Icons/Symbols were done well

Design Thinking for Grades 9

Assessment Matrix:

Module 3.0: Introduction to Problem Identification and Empathy:

Achievement Levels	1-2 BEGINNING	3-4 DEVELOPING	5-6 PROMISING	7-8 PROFICIENT	9-10 EXCELLENT
Task 3.1 Ask Questions	The student asked is yet to ask questions and the Mind-map of the topic 'Waste Disposal in School' is yet to be done.	The student asked a few questions and the Mind-map of the topic 'Waste Disposal in School' was just about done.	The student asked some questions and the Mind-map of the topic 'Waste Disposal in School' was somewhat done.	The student asked questions and the Mind-map of the topic 'Waste Disposal in School' was done fairly well.	The student asked questions and the Mind-map of the topic 'Waste Disposal in School' was done very well.
Task 3.2 Primary Research	The presentation of the Summary points of the Primary Research is yet to be done	The presentation of the Summary points of the Primary Research was just about done	The presentation of the Summary points of the Primary Research was somewhat done	The presentation of the Summary points of the Primary Research was fairly done well	The presentation of the Summary points of the Primary Research was very done well
Task 3.3 Secondary Research	The presentation of the Summary points of the Secondary Research documentation is yet to be done	The presentation of the Summary points of the Secondary Research documentation was just about done	The presentation of the Summary points of the Secondary Research documentation was somewhat done	The presentation of the Summary points of the Secondary Research documentation was fairly done well	The presentation of the Summary points of the Secondary Research documentation was very done well
Task 3.4 Collating and Presentation	The collation/summary of the different stages of this module is yet to be presented	The collation/summary of the different stages of this module was presented just about well	The collation/summary of the different stages of this module was presented somewhat well	The collation/summary of the different stages of this module was presented fairly well	The collation/summary of the different stages of this module was presented very well

Design Thinking for Grades 9

Assessment Matrix:

Module 4.0: Design Project 1 with focus on Communications and emphasis on Problem Identification

Achievement Levels	1-2 BEGINNING	3-4 DEVELOPING	5-6 PROMISING	7-8 PROFICIENT	9-10 EXCELLENT
Task 4.1 Analysis of the Problem to be solved	Analysis of the design problem is yet to be done with proper categorisation and assigning priorities.	Analysis of the design problem was just about done with proper categorisation and assigning priorities.	Analysis of the design problem was somewhat done with proper categorisation and assigning priorities.	Analysis of the design problem was done fairly well with proper categorisation and assigning priorities.	Analysis of the design problem was done very well with proper categorisation and assigning priorities.
Task 4.2 a) Mind-map of the Problem and b) Life Cycle Map	Needs to complete a mind map of the problem and the Life Cycle Map under consideration	Completes a basic sketchy mind map of the problem and the Life Cycle Map under consideration	Completes an average mind map and the Life Cycle Map, with few of inconsistencies, of the problem	Completes a good mind map of the problem and the Life Cycle Map under consideration	Completes an elaborate and detailed mind map of the problem and the Life Cycle Map under consideration
Task 4.3 Ideation of solutions by sketching	Needs to complete the sketch of the possible ideas for solution to the problem	Completes a basic sketch of the possible ideas for solution to the problem	Completes an average sketch of the possible ideas for solution to the problem	Completes a good sketch of the suitable ideas for solution to the problem	Detailed and well-presented sketch of the possible creative ideas for solution to the problem
Task 4.4 Solution prototype	Needs to complete the prototype of one of the problem solution ideas.	Completes a basic prototype of the problem solution idea by using - 2D/3D design Sketches/Physical Prototyping/ Visualisation /3D Models	Completes an average and limited prototype of the problem solution idea by using - 2D/3D design Sketches/Physical Prototyping/ Visualisation /3D Models	Completes a good and appropriate prototype of the problem solution idea by using - 2D/3D design Sketches/Physical Prototyping/ Visualisation /3D Models	Completes a detailed and creative prototype of the problem solution idea by using - 2D/3D design Sketches/Physical Prototyping/ Visualisation /3D Models

Design Thinking for Grades 9

Assessment Matrix:

Module 5.0: Fundamentals of Sketching for Ideation

Achievement Levels	1-2 BEGINNING	3-4 DEVELOPING	5-6 PROMISING	7-8 PROFICIENT	9-10 EXCELLENT
Task 5.1 Drawing circles with circular objects	The student: Has not followed the instructions specifying number and size of circles. Needs to complete 1-2 circles.	The student: Has followed the instructions specifying number and size of circles. and completed 3-4 circles.	The student: Has followed the instructions specifying number and size of circles. and completed 5-6 circles.	The student: Has followed the instructions specifying number and size of circles. and completed 7-8 circles.	The student: Has followed the instructions specifying number and size of circles. and completed 9-10 circles.
Task 5.2 Sketch of Alien Monster	Has not followed instructions and the sketch of the Alien Monster is not done well based on inspiration from the form and structure of an Insect	Has just about followed instructions and the sketch of the Alien Monster is just about done based on inspiration from the form and structure of an Insect	Has somewhat followed instructions and the sketch of the Alien Monster is somewhat done based on inspiration from the form and structure of an Insect	Has mostly followed instructions and the sketch of the Alien Monster is done fairly well based on inspiration from the form and structure of an Insect	Has followed instructions and the sketch of the Alien Monster is done well based on inspiration from the form and structure of an Insect
Task 5.3 Sensitivity towards sketching from a different point of view	Needs to understand the concept of redrawing sketches from a different point of view.	Understands the basic concept of redrawing from a different point of view and completes 1 out of the required 3	Understands the basic concept of redrawing from a different point of view and completes 2 out of the required 3	Creates all 3 sketches but with few inconsistencies in the given points of view.	Creates all 3 sketches clearly showcasing the understanding of sketching from different points of view.
Tasks 5.4 Sketching in 3D a) Plan, Elevation and Section b) 1point and 2 point Perspective	a) The drawing of the Plan, Elevation and Section is yet to be done. b) The drawing of One Point and Two Point Perspective is yet to be done.	a) The drawing of the Plan, Elevation and Section is just about done. b) The drawing of One Point and Two Point Perspective is just about done.	a) The drawing of the Plan, Elevation and Section is somewhat done. b) The drawing of One Point and Two Point Perspective is somewhat done.	a) The drawing of the Plan, Elevation and Section is fairly done. b) The drawing of One Point and Two Point Perspective is fairly done.	a) The drawing of the Plan, Elevation and Section is done well. b) The drawing of One Point and Two Point Perspective is done well.

Assessment Matrix:

Module 6.0: Fundamentals of 3D

Achievement Levels	1-2 BEGINNING	3-4 DEVELOPING	5-6 PROMISING	7-8 PROFICIENT	9-10 EXCELLENT
Task 6.1 Fundamentals of 3D	Observation and Analysis of the objects at home need to be done.	Observation and Analysis of the objects at home were just about done.	Observation and Analysis of the objects at home were somewhat done well.	Observation and Analysis of the objects at home were fairly done well.	Observation and Analysis of the objects at home were done well.
Task 6.2 Fundamentals of 3D - model of the Cube or Rectangular Cuboid with a slanting top 6.2	Construction of the model of the Cube or Rectangular Cuboid with a slanting top is not yet done.	Construction of the model of the Cube or Rectangular Cuboid with a slanting top was just about done.	Construction of the model of the Cube or Rectangular Cuboid with a slanting top was somewhat done.	Construction of the model of the Cube or Rectangular Cuboid with a slanting top was fairly done well.	Construction of the model of the Cube or Rectangular Cuboid with a slanting top was done well.
Task 6.3 Design and construction of the model of the Cylinder, cone and sphere	Needs to complete the construction	Completes one out of the three tasks 1,2,3 constructions	Completes two out of the three tasks 1,2,3 constructions	Completes all the three constructions but with some errors in dimension specification as per instructions	Completes all the three constructions in accordance with dimension specifications as per instructions
Task 6.4 The construction of either Open or Closed Platonic Solids	The constructions totally lacks the ability to hold on to its desired shape and dimensions	The constructions hold their shape but have loose connections	The constructions are fairly rigid but lack clean edges/vertices/ faces	The constructions are strong with clean edges/ vertices/ faces	The constructions are very clearly defined and strong with clean edges/vertices/ faces achieving the goals as per planning
Task 6.5 Constructing creative 3D objects with expressions	Displays poor sensitivity towards constructing creative 3D objects with expressions	Displays very limited sensitivity towards constructing creative 3D objects with expressions	Displays average sensitivity towards constructing creative 3D objects with expressions	Displays sensitivity towards constructing creative 3D objects with expressions	Displays heightened sensitivity towards constructing creative 3D objects with expressions

Assessment Matrix:

Module 7.0: Introduction to Problem Analysis

Achievement Levels	1-2 BEGINNING	3-4 DEVELOPING	5-6 PROMISING	7-8 PROFICIENT	9-10 EXCELLENT
Task 7.1 Primary research Interaction and observation	The student: Needs to interact with the students/teacher and keenly observes the objects and environment	The student: Has limited interaction with the students/ teacher and observes very few of the objects and environment	The student: Has average interaction with the students/ teacher and observes some of the objects and environment	The student: Has good interaction with the students/ teacher and keenly observes the objects and environment	The student: Enthusiastically interacts with the students/ teacher and observes the objects and environment in detail
Task 7.2 Secondary Research	Needs to complete summary of information collected along with visuals and short text in form of a report or slides	Completes a limited listing of summary of information collected along with visuals and short text in form of a report or slides	Completes an average listing of summary of information collected along with visuals and short text in form of a report or slides	Completes a good listing of summary of information collected along with visuals and short text in form of a report or slides	Completes detailed listing of summary of information collected along with visuals and short text in form of a report or slides
Task 7.3 Information Analysis, Observation and classification	Needs to summarize information from primary research and classify into different categories and affinities	Limited summarizing of information from primary research and its classification into different categories and affinities	Average summarizing of information from primary research and its classification into different categories and affinities	Completes summarizing of information from primary research and its acceptable classification into different categories and affinities	Completes detailed summarizing of information from primary research and its accurate classification into different categories and affinities
Task 7.4 Information Mappings – Temporal and Spatial	The Temporal and Spatial Mappings are yet to be done	The Temporal and Spatial Mappings were just about done	The Temporal and Spatial Mappings were somewhat done	The Temporal and Spatial Mappings were fairly done well	The Temporal and Spatial Mappings were done well

Assessment Matrix:

Module 8.0: Design Project 2 with focus on Products and emphasis on Problem Analysis and Mappings

Achievement Levels	1-2 BEGINNING	3-4 DEVELOPING	5-6 PROMISING	7-8 PROFICIENT	9-10 EXCELLENT
Task 8.1 Redefining the problem to be solved	The student: Needs to redefine the problem statement with inputs from analysis of the previous Module	The student: Redefines a basic sketchy problem statement with inputs from analysis of the previous Module	The student: Redefines a problem statement but with few inconsistencies from analysis of the previous Module	The student: Redefines a specific problem statement with inputs from analysis of the previous Module	The student: Redefines a specific, appropriate and well framed problem statement with inputs from analysis of the previous Module
Task 8.2 List of Materials and Processes	Needs to complete the list of Materials and processes used for the Object	Completes a basic sketchy list of Materials and processes used for the Object	Completes an average list of Materials and processes used for the Object	Completes a good list of Materials and processes used for the Object	Completes an elaborate and detailed list of Materials and processes used for the Object
Task 8.3 Ideation of solutions by sketching	Needs to complete the sketch of the possible ideas for solution to the problem	Completes a basic sketch of the possible ideas for solution to the problem	Completes an average sketch of the possible ideas for solution to the problem	Completes a good sketch of the suitable ideas for solution to the problem	Detailed and well-presented sketch of the possible creative ideas for solution to the problem
Task 8.4 Solution prototype	Needs to complete the prototype of one of the problem solution ideas.	Completes a basic prototype of the problem solution idea by using - 2D/3D design Sketches/Physical Prototyping/ Visualisation /3D Models	Completes an average and limited prototype of the problem solution idea by using - 2D/3D design Sketches/Physical Prototyping/ Visualisation /3D Models	Completes a good and appropriate prototype of the problem solution idea by using - 2D/3D design Sketches/Physical Prototyping/ Visualisation /3D Models	Completes a detailed and creative prototype of the problem solution idea by using - 2D/3D design Sketches/Physical Prototyping/ Visualisation /3D Models

Achievement Levels	1-2 BEGINNING	3-4 DEVELOPING	5-6 PROMISING	7-8 PROFICIENT	9-10 EXCELLENT
Task 8.5 Final presentation and documentation	Needs to complete the presentation beyond title and team members	A limited presentation covering only a brief summary	An average presentation with lack of clarity in the flow of ideas and stages undertaken in the project	A good presentation with a logical structure of ideas and stages undertaken in the project. No mention of future suggestions.	A detailed and effective presentation covering all stages of the project including user feedback and future suggestions.
Sensitive towards major design opportunities	Displays poor sensitivity towards major design opportunities	Displays very limited sensitivity towards major design opportunities	Displays average sensitivity towards major design opportunities	Displays sensitivity towards major design opportunities	Displays heightened and creative sensitivity towards major design opportunities

Student Feedback Form:

NAME	CLASS	MODULE	TASK	ACTIVITY	DATE
Give a rating for each of the statements below: - by placing a tick mark in the corresponding box.					
	INADEQUATE	FAIR	GOOD	VERY GOOD	EXCEPTIONAL
Level of effort you put into activity					
Your level of knowledge at the start of the activity					
Your level of knowledge at the end of the activity					
Understanding of exposure slides/video					
	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
I enjoyed doing the activity					
I understood the design principles while doing the task					
I liked trying out different creative variations					
I can apply design thinking process to problem solving					
I enjoyed working in collaboration with my group					
Additional Comments:					
What I liked the most:					
What can be done better:					
What can be Added/Changed:					

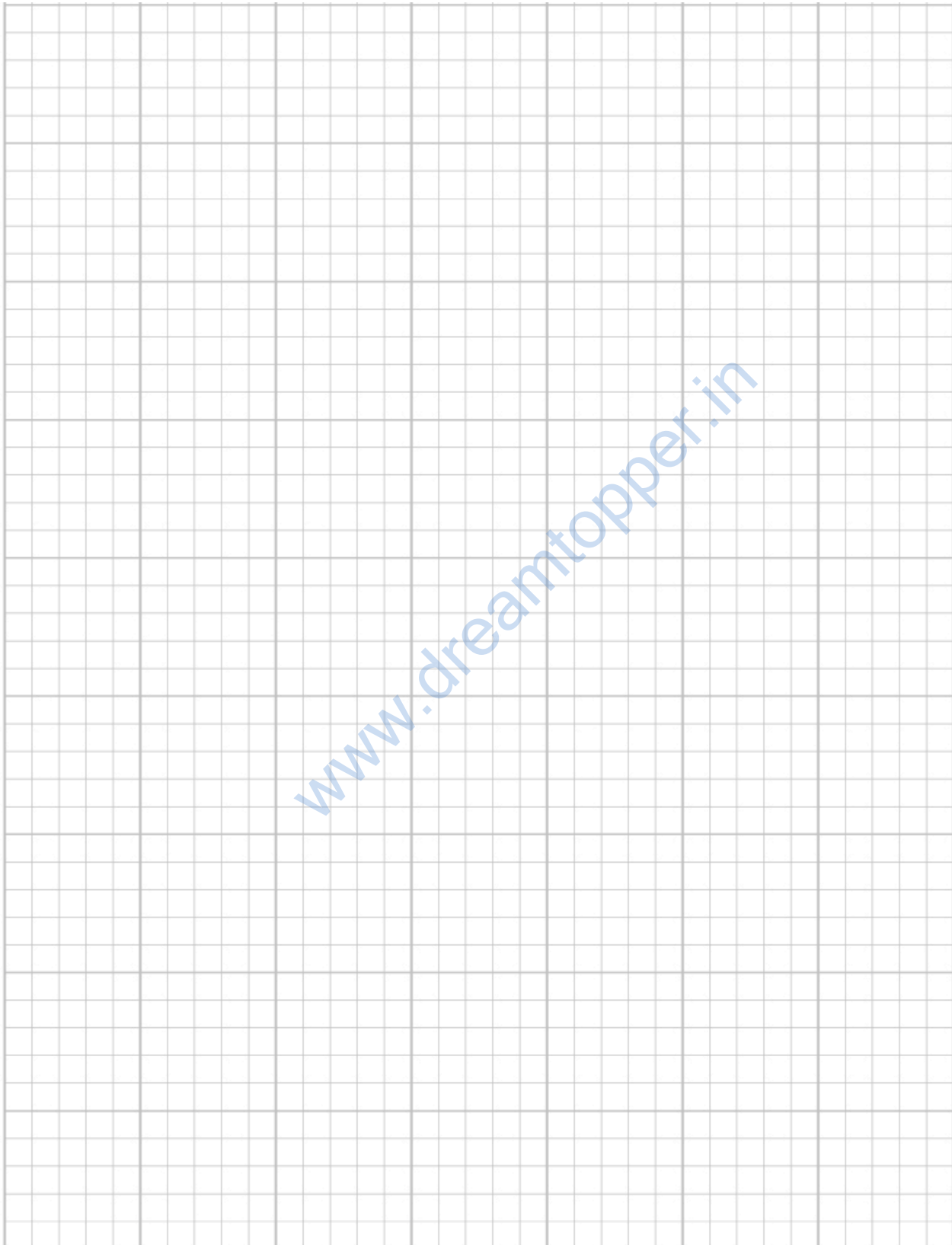
Teacher Feedback Form:

NAME	CLASS	MODULE	TASK	ACTIVITY	DATE
Comments:					
- place a tick mark in the corresponding box.					
	COMMENTS				
It was easy to deliver the exposure modules:	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
Your comments:					
It was easy/satisfying/enjoyable to conduct the task activities:	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
Your comments:					
No issues were faced with regard to assessment of the task:	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
Your comments					
Common questions posed by the students:					
Suggestions for improving the task or suggestion of another task:					
Other suggestions, if any:					

Grid layout for sketches and taking notes:



Grid layout for sketches and taking notes:



Credits

Acknowledgement and Credits:

Ministry of Education:

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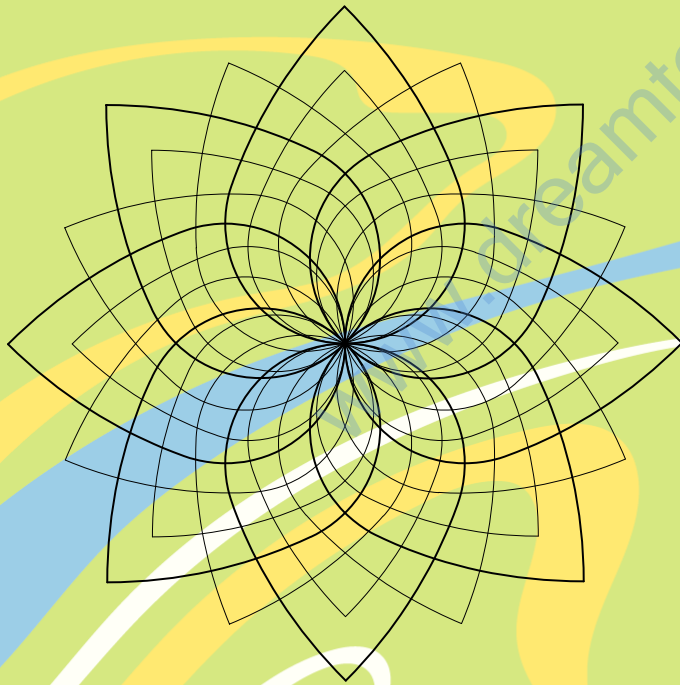
Design Thinking and Innovation

for Grade 9, Semester 1 and 2

Taskbook

2022

Hope you enjoyed the Tasks



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