Utopian Invention Drawing

Concept: Create an invention that will improve our world.

STEP ONE: Look on the reverse of this sheet at Leonardo Da Vinci’s: Visions of the Future and answer the following questions:

1. List the five modern inventions listed that Da Vinci designed first.

2. Give at least 3 reasons for why you think Da Vinci invented the inventions on the reverse of this sheet.

3. Choose one of Da Vinci’s inventions, and explain why you think it has had the biggest impact on modern society.

STEP TWO: Make up a list of inventions that would enrich our lives. Examples: An Animal Talk Translator. A mechanical device that decodes animal sounds so humans can understand them.

Finding Machine. A device that locates lost articles.

Visualize your invention by making a series of 3 conceptual designs of your ideas in your sketchbook.

STEP THREE: Have your sketch approved by the teacher before starting your large drawing. Draw your utopian invention being used – like in Leonardo Da Vinci’s drawings.

WRITE your Artistic Statement Template to document your artistic process. Who has influenced your design (Leonardo Da Vinci?) and why?

STEP FOUR: REFLECT: Answer the following questions using the elements and principles of design and complete your Artistic Statement Template for formal evaluation.

1. What part of your finished project did you find most successful and why?
2. What part of your finished project did you find least successful and why?
3. If you had to do this project, what part would you change or improve on & why?
Leonardo Da Vinci’s: Visions of the Future

Leonardo described and sketched ideas for many inventions hundreds of years ahead of their time. But it seems the very few of these were ever built and tested during his life. Though his notes suggest that he wished to organize and publish his ideas, he died before he could accomplish this important goal. After his death, his notebooks were hidden away, scattered, or lost, and his wonderful ideas were forgotten.

Leonardo sketched this design for a parachute in 1485. He suggested what size would be needed to allow a person to fall safely from a great height. No one knows whether he ever tested a full scale model.

Leonardo sketched several different designs for flying machines including this one with a rotating airscrew. He intended to power it with a wound-up spring.

Leonardo’s many military inventions included this design for an armored vehicle. Four soldiers sitting inside could turn cranks to move the wheels on this “tank.”

Leonardo never achieved human-powered flight, but he imagined the need for retractable landing gear on his flying machines.

Leonardo sketched designs for several different diving suits. Most required a diver to breathe air from the surface through long hoses. In this design, he imagined a crush proof air chamber attached to the diver’s chest to allow the diver to swim freely without connection to the surface.

Ornithopter: In about 1490 Leonardo da Vinci drew plans for a flying machine.
A) Influence from Da Vinci’s inventions/other influence(s):

B) Drawing techniques used in my work and how they support my intended visual message:
### Utopian Invention Drawing Rubric

<table>
<thead>
<tr>
<th>Knowledge/Understanding</th>
<th>Level 0</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrates understanding of the elements &amp; principles of design in the drawing (e.g., shape, form, line, proportion unity)</td>
<td>Work does not meet assignments expectations for this category. Incomplete. 0.25</td>
<td>Student demonstrates limited understanding of the elements &amp; principles of design in the drawing. 0.25</td>
<td>Student demonstrates some understanding of the elements &amp; principles of design in the drawing. 0.75</td>
<td>Student demonstrates considerable understanding of the elements &amp; principles of design in the drawing. 1.00</td>
<td>Student demonstrates a high degree of understanding of the elements &amp; principles of design in the drawing. 1.00</td>
</tr>
<tr>
<td>Thinking/Inquiry</td>
<td>Work does not meet assignments expectations for this category. Incomplete. 0.25</td>
<td>Student depicts representational imagery of Utopian Invention in the drawing with limited effectiveness. 0.25</td>
<td>Student depicts representational imagery of Utopian Invention in the drawing with considerable effectiveness. 0.75</td>
<td>Student depicts representational imagery of Utopian Invention in the drawing with a high degree of effectiveness. 1.00</td>
<td></td>
</tr>
<tr>
<td>Utopian Invention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>Work does not meet assignments expectations for this category. Incomplete. 0.25</td>
<td>Student discusses influence(s) in the artistic statement with limited clarity. 0.25</td>
<td>Student discusses influence(s) in the artistic statement with some clarity. 0.50</td>
<td>Student discusses influence(s) in the artistic statement with considerable clarity. 0.75</td>
<td>Student discusses influence(s) in the artistic statement with a high degree of clarity. 1.00</td>
</tr>
<tr>
<td>Clarifies Da Vinci's inventions/influence(s) in the artistic statement</td>
<td>Incomplete. 0.25</td>
<td>Student explains use of drawing techniques in the artistic statement with limited clarity. 0.25</td>
<td>Student explains use of drawing techniques in the artistic statement with some clarity. 0.50</td>
<td>Student explains use of drawing techniques in the artistic statement with considerable clarity. 0.75</td>
<td>Student explains use of drawing techniques in the artistic statement with a high degree of clarity. 1.00</td>
</tr>
<tr>
<td>Reflective Questions: Strength, Weakness &amp; Next Step</td>
<td>Incomplete. 0.25</td>
<td>Poor, yes/no answers/limited incomplete. 0.25</td>
<td>Somewhat coherent and somewhat complete. 0.50</td>
<td>Clear and substantial answers. 0.75</td>
<td>Superior and insightful answers. 1.00</td>
</tr>
<tr>
<td>Application</td>
<td>Work does not meet assignments expectations for this category. Incomplete. 0.25</td>
<td>Preliminary sketches are poor/incomplete. Concepts are poor/incomplete. Planning is tentative or non-existent. (0.5) 0.5</td>
<td>Preliminary sketches are somewhat complete. Concepts are somewhat complete. Planning is somewhat substantial &amp; shows some alternative ideas. (1-2) 1</td>
<td>Preliminary sketches are mostly complete. Concepts are complete. Planning is evident &amp; shows some divergent thinking is evident. (2-3) 1-1.75</td>
<td>Preliminary sketches are thoroughly complete. Concepts are fully developed. Planning is exceptional &amp; considerable flexibility in thinking. (3+) 2</td>
</tr>
<tr>
<td>Creative Process: Demonstration of Skill Development &amp; following procedures including Clean Up</td>
<td>Incomplete. 0.25</td>
<td>Student demonstrates limited effectiveness in demonstrating the creative process and following procedures. 5-6</td>
<td>Student demonstrates considerable effectiveness in demonstrating the creative process and following procedures. 7-8</td>
<td>Student demonstrates superior effectiveness in demonstrating the creative process and following procedures. 8-10</td>
<td>Student demonstrates a high degree of using the elements &amp; principles of design &amp; drawing techniques to produce a highly effective art work. 5</td>
</tr>
<tr>
<td>Uses elements &amp; principles of design and drawing techniques to produce an effective artwork (proportion, shape, line, etc.)</td>
<td>Incomplete. 0.25</td>
<td>Student demonstrates limited use of the elements &amp; principles of design &amp; drawing techniques to produce an art work of some effectiveness. 2-3</td>
<td>Student demonstrates some use of the elements &amp; principles of design &amp; drawing techniques to produce an art work of considerable effectiveness. 3-4</td>
<td>Student demonstrates considerable use of the elements &amp; principles of design &amp; drawing techniques to produce an art work of considerable effectiveness. 3-4</td>
<td>Work demonstrates exact &amp; balanced amounts of extreme blacks, whites &amp; greys. The composition contains balanced value. 5</td>
</tr>
<tr>
<td>Value (Shade &amp; Tone)</td>
<td>Incomplete. 0.25</td>
<td>Work demonstrates few areas of extreme black or white. The composition contains minimal value to reflect 3-dimensionality. 2</td>
<td>Student demonstrates considerable use of the elements &amp; principles of design &amp; drawing techniques to produce an art work of considerable effectiveness. 3-4</td>
<td>Work demonstrates some areas of extreme black or white. The composition contains sufficient value to reflect 3-dimensionality. 3-4</td>
<td>Work demonstrates exact &amp; balanced amounts of extreme blacks, whites &amp; greys. The composition contains balanced value. 5</td>
</tr>
</tbody>
</table>

Name:__________

### A1. The Creative Process

- apply the creative process to create a variety of artworks, individually and/or collaboratively;
A1.1 use various strategies, individually and/or collaboratively, to generate, explore, and elaborate on ideas and to develop and revise detailed plans for the creation of art works that address a variety of purposes (e.g., use brainstorming, concept webs, and/or groups discussions to formulate original ideas for thematic works and/or works of personal expression; use research and discussions with a partner to explore and elaborate on ideas; use diagrams, notes, and/or outlines to help them formulate detailed plans for the art work; revise their plans on the basis of reflection)

A1.2 apply the appropriate stages of the creative process to produce and revise two- and three-dimensional art works using a variety of traditional and contemporary media (e.g., explore, experiment with, and refine their use of a variety of media; choose a medium/media appropriate for their planned art work; reflect on the effectiveness of preliminary versions of their work; revise their art work on the basis of reflection and useful feedback)

A1.3 document their use of each stage of the creative process, as well as varied and extensive research, in a portfolio that includes art works created for a variety of purposes (e.g., ensure that their portfolio includes evidence of idea generation and elaboration, research, investigation, planning, exploration, experimentation, and revision; include a variety of works created for different purposes), and review and reflect on the contents of their portfolio to determine how effectively they have used the creative process

A2. The Elements and Principles of Design: apply the elements and principles of design to create art works for the purpose of self-expression and to communicate ideas, information, and/or messages;

A2.1 explore how elements and principle of design can be used to convey emotion and enhance personal expression, and use a combination of these elements and principles to create two- and three-dimensional art works that express personal feelings and communicate specific emotions to an audience (e.g., explore how variations in line, value, form, proportion, and emphasis can be used to convey various emotions; adapt their findings to enhance expression in their art work)

A3. Production and Presentation: produce art works, using a variety of media/materials and traditional and emerging technologies, tools, and techniques, and demonstrate an understanding of a variety of ways of presenting their works and the works of others.

A3.2 explore a range of traditional and current materials, technologies, techniques, and tools used by visual artists (e.g., Claude Monet’s use of optical colour mixing; Andy Warhol’s use of silkscreens; George Segal’s use of plaster bandage; Jean-Paul Riopelle’s use of a palette knife for impasto application of paint; Daphne Odjig’s use of interconnecting black lines), and adapt and apply them to create original art works

B1. The Critical Analysis Process: demonstrate an understanding of the critical analysis process by examining, interpreting, evaluating, and reflecting on various art works;

B1.1 analyse their initial response to art works (e.g., describe their initial reaction to an art work and determine which specific aspects of the work and their personal experience led to their reaction)

B1.2 deconstruct the visual content and the use of elements and principles of design in their own art work and the work of others (e.g., identify individual elements and principles and aspects of the visual content in an art work, interpret their function, and analyse how the artist has manipulated them to create impact, emphasis, mood, movement, and meaning; compare The Abduction of the Daughters of Leucippus by Peter Paul Rubens to the cover of a contemporary comic book about an action hero, with reference to the artists’ use of colour, line, shape, value, balance, and emphasis)

B1.3 explain, with reference to particular works, both historical and contemporary (e.g., J. M. W. Turner’s Rain, Steam, and Speed: The Great Western Railway; Maya Lin’s Vietnam Veterans Memorial), how knowledge of an art work’s cultural and historical context, achieved through research, has clarified and enriched their understanding of the work’s intent and meaning

B1.4 describe and reflect on the qualities of their own art works and the works of others, and evaluate the effectiveness of these works, using a variety of criteria

B2. Art, Society, and Values: demonstrate an understanding of how art works reflect the societies in which they were created, and how they can affect both social and personal values;

B2.1 analyse the function and social impact of different kinds of art works in both past and present societies (e.g., the use of art works for ritualistic and religious purposes; for social and/or political commentary; as propaganda; as symbols of economic or social power; to commemorate people and/or historical events; to instruct)

B2.2 explain, on the basis of research, ways in which various art works are a response to and a reflection of the societies in which they were created

B2.3 reflect on and explain how creating and analysing art works has affected their personal identity and values and/or changed their perceptions of society and social issues (e.g., with reference to their emotional awareness and their ability to express themselves; their awareness of stereotypes; their understanding of the meaning of objects and symbols associated with a variety of cultural groups; their awareness of and relationship to their physical environment; their position on social issues such as censorship, discrimination, inequality)

C1. Terminology: demonstrate an understanding of, and use correct terminology when referring to, elements, principles, and other components related to visual arts;

C1.1 demonstrate an understanding of the elements and principles of design, and use terminology related to these elements and principles correctly and appropriately when creating or analysing art works (e.g., when describing how they have used elements and principles in a sculpture to convey a sense of movement)

C1.3 using appropriate terminology, explain the creative process and describe in detail the critical analysis process, with particular reference to the role of deconstruction in the latter process

C2. Conventions and Techniques: demonstrate an understanding of conventions and techniques used in the creation of visual art works;

C2.1 demonstrate an understanding of a wide variety of techniques that artists use to achieve a range of specific effects (e.g., techniques used to create the illusion of depth and perspective and to create texture on different surfaces; the use of additive and subtractive sculpture, layering, positive and negative space, and relief to create effects)

C2.2 demonstrate an understanding of a variety of conventions used in visual arts (e.g., allegory, expressive exaggeration, juxtaposition, synectics; conventions associated with heroic, narrative, naturalistic, propaganda, realistic, and satirical art)

C3. Responsible Practices: demonstrate an understanding of responsible practices in visual Arts.