Karakuri Sculpture

The word **Karakuri** is Japanese and means a "mechanical device to tease, trick, or take a person by surprise".

An **Automaton** is a self-operating machine. The word automaton is the latinization of the Greek automaton, (neuter) "acting of one’s own will".

**STEP ONE: RESEARCH** the History of Karakuri and Automata by visiting the school network:

[K://Mr.Anette/AVI3M/4M/Sculpture/Karakuri Sculpture/intro.htm](K://Mr.Anette/AVI3M/4M/Sculpture/Karakuri Sculpture/intro.htm)

**STEP TWO: ANSWER** the questions on the History of Karakuri and Automata handout. (attached)

**STEP THREE: CHOOSE** one Karakuri Paper Automaton sculpture template to re-design.

**CONSIDER:** characterization in your re-design: shape, form and colour.

**STEP FOUR: CUT** out the various shapes using exacto blades and then **COLOUR** your Karakuri Paper Automaton sculpture with pencil crayons.

**STEP FIVE: GLUE** the Karakuri Paper Automaton sculpture together with white glue or glue sticks.

**STEP SIX: REFLECT** by answering the following questions on the attached sheet.

1. What do you think was the most successful part of your sculptures and why?

2. What do you think was the least successful part of your sculptures and why?

3. If you had to do this project again, what changes would you make to your sculptures and why?

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Super Mario Papercraft Karakuri Automata
1. What is Automaton? (1)

2. Who is Prometheus and was reputed to have created according to Greek mythology? (2)

3. Who is Hephaestus and what did he allegedly create? (2)

4. What was the Antikythera mechanism and what did it do? (2)

5. What was the South Pointing Chariot and what did it do? (2)


7. What could Jacques De Vaucanson’s Automaton do? (1)

8. What could Pierre Jaquet-Droz’s three Automatons do? (1)

9. What does the Japanese word “Karakuri” mean and what are the 3 types? (4)

   Word Meaning:  
   1.  
   2.  
   3.  

10. What was Joseph Faber’s Automaton called and what could it do? (1)

11. Who is Keisuke Saka and what can his Automaton do? (2)
Select one of Karakuri Automaton and identify the formal, expressive and technical qualities of the work.

Formal Qualities: (How are the elements and principles used: (Line, Shape, Form, Texture, Balance, Rhythm, Pattern, Contrast, Emphasis, Value, Space, Movement, Colour, Variety, Proportion, Unity)

Expressive Qualities: (mood/feeling):

Technical Qualities: (how was it created):

Identify sensory, formal, expressive, symbolic, and technical qualities in your own Karakuri Paper Automaton and make specific connections to a historic Karakuri Automaton work studied.

Formal Qualities: (How are the elements and principles used: (Line, Shape, Form, Texture, Balance, Rhythm, Pattern, Contrast, Emphasis, Value, Space, Movement, Colour, Variety, Proportion, Unity)

Expressive Qualities: (mood/feeling):

Technical Qualities: (how was it created):

Connections to historical Automaton studied:

Describe the stages of the design process (research, conceptual sketches, experimentation, revision(s)) followed in the creation of your Karakuri Paper Automaton.

REFLECT by answering the following questions:
1. What do you think was the most successful part of your sculpture and why?
2. What do you think was the least successful part of your sculpture and why?
3. If you had to do this project again, what changes would you make to your sculpture and why?
## Karakuri Sculpture Evaluation

<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 sculpture (e.g., shape, balance, colour)</td>
<td>Work does not meet assignments expectations for this category. Incomplete. 0</td>
<td>Student demonstrates limited understanding of the elements &amp; principles of design in the sculpture. 0.25</td>
<td>Student demonstrates some understanding of the elements &amp; principles of design in the sculpture. 0.50</td>
<td>Student demonstrates considerable understanding of the elements &amp; principles of design in the sculpture. 0.75</td>
<td>Student demonstrates a high degree of understanding of the elements &amp; principles of design in the sculpture. 1</td>
</tr>
<tr>
<td>Thinking/Inquiry</td>
<td>Work does not meet assignments expectations for this category. Incomplete. 0</td>
<td>Concept and context is unclear and/or weak. Meaning or ideas conveyed are not on par with student grade level. 0.25</td>
<td>Concept and context is slightly unclear and/or weak. Meaning or ideas conveyed are below expectations for student’s grade level. 0.50</td>
<td>Concept and context is clear and valid. Meaning or ideas conveyed are on par with student grade level. 0.75</td>
<td>Concept and context is clear and strong. Meaning or ideas conveyed are above expectations for grade level. 1</td>
</tr>
<tr>
<td>Communication</td>
<td>Work does not meet assignments expectations for this category. Incomplete. 0</td>
<td>Student answers research questions with limited clarity. 0.25</td>
<td>Student answers research questions with some clarity. 0.50</td>
<td>Student answers research questions with considerable clarity. 0.75</td>
<td>Student answers research questions with a high degree of clarity. 1</td>
</tr>
<tr>
<td>Reflective Questions</td>
<td>Incomplete. 0</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</td>
</tr>
<tr>
<td>Application</td>
<td>Work does not meet assignments expectations for this category. Incomplete. 0</td>
<td>Preliminary sketches are poor/incomplete. Concepts are tentative or nonexistent. (0.3) 0.5</td>
<td>Preliminary sketches are somewhat clear and complete. Concepts are somewhat complete. Planning is somewhat substantial &amp; shows some alternative ideas. (0.5–1) 1</td>
<td>Preliminary sketches are mostly complete. Concepts are complete. Planning is evident &amp; shows some divergent thinking is evident. (1–1.5) 2</td>
<td>Preliminary sketches are thorough and complete. Concepts are fully developed. Planning is exceptional &amp; shows considerable flexibility in thinking. (2) 3</td>
</tr>
<tr>
<td>Creative Process: Demonstration of Skill Development &amp; following procedures including Clean Up</td>
<td>Incomplete. 0</td>
<td>Student demonstrates limited effectiveness in demonstrating the creative process and following procedures. 5</td>
<td>Student demonstrates some effectiveness in demonstrating the creative process and following procedures. 7-8</td>
<td>Student demonstrates considerable effectiveness in demonstrating the creative process and following procedures. 10</td>
<td>Student demonstrates superior effectiveness in demonstrating the creative process and following procedures. 10</td>
</tr>
<tr>
<td>Uses elements &amp; principles of design and sculpture techniques to produce an effective artwork</td>
<td>Incomplete. 0</td>
<td>Student demonstrates limited use of the e &amp; ps of design &amp; sculpture techniques to produce art works of limited effectiveness. 1</td>
<td>Student demonstrates some use of the e &amp; ps of design &amp; sculpture techniques to produce art works of considerable effectiveness. 2-3</td>
<td>Student demonstrates considerable use of the e &amp; ps &amp; sculpture techniques to produce art works of considerable effectiveness. 3-4</td>
<td>Student demonstrates a high degree of using the e &amp; ps of design &amp; sculpture techniques to produce highly effective art works. 5</td>
</tr>
<tr>
<td>Detail and Accuracy: Shape and Balance</td>
<td>Incomplete. 0</td>
<td>The shape of the works are not balanced and/or incorporates little/no detail. 1</td>
<td>The shape of the works is somewhat balanced and/or incorporates some detail. 2</td>
<td>The shape of the works is considerably balanced and/or incorporates adequate detail. 3-4</td>
<td>The shape of the works are considerably balanced and/or incorporates substantial detail. 5</td>
</tr>
</tbody>
</table>

A1. The Creative Process: apply the creative process to create a variety of art works, individually and/or collaboratively; A1.1 use a variety of strategies, individually and/or collaboratively, to generate Ideas and to develop plans for the creation of art works (e.g., in small groups, use brainstorming, research, concept webs, and/or mind maps to generate original and imaginative ideas; filter their ideas to select a suitable one to serve as the basis for their art work; use notes and/or thumbnail sketches to help them develop clear and flexible plans that show attention to detail; revise their plans on the basis of peer- and self-assessment)
**A1.** Use experimentation, reflection, and revision when producing a variety of art works in each of the following areas: drawing, sculpture, painting, printmaking, and mixed media (e.g., experiment with a variety of materials/media, techniques, and tools to find ones that are appropriate for their planned art work; reflect on their preliminary work and on feedback from their peers before revising their art work).

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

- A2.1 use various elements and principles of design to create art works that express personal feelings and/or communicate emotions to an audience (e.g., create a mixed-media self-portrait that uses colour, line, and shape in the style of Frida Kahlo to convey their personality and elicit emotions from the audience);
- A2.2 apply elements and principles of design as well as art-making conventions to create art works that communicate ideas, information, or messages, and/or that convey a point of view on an issue (e.g., use colour, line, shape, contrast, and emphasis when creating a graffiti piece that addresses an issue in their local community; incorporate symbolism to communicate a message about an environmental issue);

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

- A3.1 explore and experiment with a variety of materials/media, including alternative media, and traditional and/or emerging technologies, tools, and techniques, and apply them to create 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 identify and describe their initial reactions to a variety of art works, and explain the reasons for their reactions (e.g., the aspects of the work and/or their personal experiences that contributed to their first impressions of its mood, subject, intent);
- B1.2 identify and describe the elements and principles of design used in their own art works and the works of others, and describe their effects (e.g., how line, colour, and shape are used to create emphasis, mood, and/or movement);
- B1.3 explore and interpret a variety of art works, both historical and contemporary, to identify and describe their purpose and style, the materials used, and the meanings the works convey;
- B1.4 use a variety of strategies (e.g., peer- and self-assessment, formal critiques, feedback and reflection following public displays) to identify and reflect on the qualities of their own art works and the works of others, and evaluate the effectiveness of these works

**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 personal values;

- B2.1 identify and describe the function of various types of art works in past and present societies;
- B2.2 identify and describe ways in which various art works reflect the societies in which they were created

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

- C1.1 use appropriate terminology related to elements and principles of design when creating and analysing art works;
- C1.2 use appropriate vocabulary to describe techniques, materials, and tools when creating and presenting visual art works;
- C1.3 identify and describe the stages of the creative process and the critical analysis process (e.g., how reflection relates to the other stages of the creative process)

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

- C2.2 demonstrate an understanding of several conventions used in visual art works (e.g., exaggeration, metaphor, simile, symbols, synectics; conventions associated with heroic, narrative, naturalistic, and satirical works)

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

- C3.2 demonstrate an understanding of safe and conscientious practices associated with the use of materials, tools, and technologies in visual arts, and apply these practices when creating and/or presenting art works (e.g., use appropriate precautions when dealing with hazardous materials; adopt protective measures when using sharp tools; keep their work space clean and free of physical and other hazards; demonstrate respect for classroom facilities, tools, equipment, and technological devices)