



Title of the STEAM Unit: Japanese Karuta Game

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RELATED SUBJECTS	GRADE RECOMMENDATIONS	TOTAL ACTIVITY TIME	LEARNING OBJECTIVES DURING THE LESSON SUBJECT-SPECIFIC COMPETENCIES	LEARNING OBJECTIVES AFTER THE LESSON
Arts, Engineering, Mathematics, History, Culture Studies	6-16	2-3h	<p>Motoric skills, drawing, aesthetics, understanding composition. Simplifying subjects, understanding scales</p> <p>Learning simple coding, writing with different codes, symbols and languages, horizontal, and vertical writing systems and pictures</p>	<p>Students understand how to create and design a game. Also understand the importance of aesthetics, composition and how to create recognizable symbols</p> <p>Students understand the key laws of the game</p>





			<p>Learning to create a game or rules of a game, and how to create and play it</p> <p>Group Work skills</p> <p>New words, language education</p> <p>Cross cultural understanding</p>	<p>Learn new language & (written, read and spoken)</p> <p>Students understand different cultures, language and habits by interacting and doing and studying the game themselves</p> <p>Students recognize how playing makes learning interesting</p>
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OVERVIEW: TOPIC & PURPOSE

In the Japanese Karuta Game STEAM unit, students at Viitaniemi School, led by a diverse team including Finnish educators and Japanese exchange students, delved into the multifaceted world of the traditional Japanese Karuta card game. This unit bridges various academic disciplines—ranging from Arts and Engineering to Mathematics, History, and Cultural Studies. Designed for students aged 6 to 16, this engaging 2–3-hour unit spans several sessions, each crafted to foster a comprehensive understanding of both the game’s cultural significance and its educational value. The primary objective is to cultivate a suite of skills and knowledge bases among the students:

- **Motoric Skills and Aesthetics:** Students will enhance their fine motor skills through the tactile activities of drawing and card creation, learning about aesthetic composition and the simplification of complex subjects.
- **Cultural and Linguistic Fluency:** Participants will gain insights into Japanese culture and language, promoting cross-cultural understanding and appreciation.





- **Mathematical and Engineering Thinking:** The game's structure will help students grasp basic coding concepts, the importance of rules in game design, and practical application of math in measuring and scaling.
- **Social and Emotional Learning:** Through collaborative game design and play, students will improve their teamwork and communication skills, experiencing the joy and social interaction of shared play.

The purpose of this unit is to not only educate students about a unique aspect of Japanese culture but also to empower them to integrate diverse knowledge spheres through the creation of a playable Karuta game. This approach highlights the STEAM philosophy of blending scientific, artistic, and cultural education to produce holistic learning experiences. The unit aims to inspire students to see the value in cross-cultural exchanges and the practical fun in applying academic concepts to real-world scenarios. By the end of the unit, students will have developed not just a new sport to enjoy during school breaks but also valuable life skills that transcend the classroom.

STEAM ELEMENTS

<p>ELEMENT 1: context presentation</p>	<p>Creating a Karuta card game. Its history, purpose and learning. Connections with art, history, culture, motoric skills, engineering, physics, mathematics, language education, cross cultural understanding, activity, group work skills.</p>
<p>ELEMENT 2: creative design</p>	<p>Making the Karuta game. Writing and learning new words, fine motor skills Drawing and creating symbols, creativity Playing the game and combining everything into a larger unit</p>
<p>ELEMENT 3: emotional and social learning</p>	<p>Learning cooperation and communication skills by creating and playing games. Concentrating and experiencing focus in the creation process. Experiencing free play and joy by playing the game and learning a new game.</p>





STEAM SUBJECT ELEMENTS

STEAM SUBJECTS	SCIENCE	TECHNOLOGY	ENGINEERING	ARTS	MATHEMATICS
SHORT INTRODUCTION TO RELATED SUBJECT ELEMENTS	Observations of the speed. Who is the quickest?	Learning about the rules of the game.	Understanding how a game is created and played.	Drawing and writing cards. Learning composition. Developing fine motoric skills.	Counting, exploring the different patterns.

SYLLABUS

LESSONS	SUBJECTS	TOPIC OF THE UNIT	LEARNING OBJECTIVES DURING THE LESSON: SUBJECT SPECIFIC COMPETENCIES	LEARNING OBJECTIVES AFTER THE LESSON: STEAM COMPETENCIES
1	Art, Languages	Preparing the Japanese Karuta card game	Developing recognition through observing the game through memory & reaction Developing fine motoric skills by creating, coloring and drawing the cards	Students can understand cultural differences and similarities of different cultures. They can understand how the game is created and played.





STEAM Connect Material Collection

			<p>Learning to simplify and create symbols</p> <p>Learning to read, write and exercise new language</p> <p>Understanding different cultures and traditions</p> <p>Groupwork skills</p>	<p>Students can create simple codes.</p> <p>They understand the meaning and importance of symbols and how to simplify.</p>
2	Engineering, Mathematics	Playing cards and learning the game	<p>Learning simple coding</p> <p>Writing with different codes, symbols and languages</p> <p>Horizontal and vertical writing and writing system & pictures</p> <p>Learning to create a game or rules of game and how to play it</p> <p>Group Work skills</p>	





INSTRUCTIONAL PLAN BY LESSON

TIME PLAN	TEACHING & LEARNING ACTIVITIES	MATERIALS	LEARNING OBJECTIVES
INTRODUCTION (20 min)	History of the game, Explaining the way of preparing the game, the methods, etc.	Katuta game history & meaning attached - PDF Karuta -for print -to show & print	<p>Developing recognition through observing the game through memory & reaction</p> <p>Developing fine motoric skills by creating, coloring and drawing the cards.</p> <p>Learning to simplify and create symbols. Students can understand how to create a simple code.</p> <p>Learning to read, write and exercise new writing system</p> <p>Practice language skills</p> <p>Understanding different cultures and traditions</p>
LEARNING ACTIVITIES (50 -60minutes)	Making the 48 pcs of Karuta game cards in groups	2 paper prints (attached) -for print -to show scissors, coloring pencils	Through creating the cards and playing students explore new games, real life coding, co-working, memorizing, focusing, reaction time, new culture and language





	<p>Dividing the cards between the group members</p> <p>Students write individually on their cards different words in English, Finnish and Japanese</p> <p>Hiragana vertical writing shown in printed instructions</p> <p>Students also draw pictures and symbols and color and finish the cards to make the card symbol message easy to understand. So, the game is playable.</p> <p>Explaining the rules of the game, practice and play</p>		
<p>WRAP-UP & EVALUATION (15minutes)</p>	<p>Summary and sharing experiences</p>		





EVALUATION PLAN BY LESSON

LESSON	EVALUATION CRITERIA	EVALUATION METHOD
1	Does the student understand how the game was created and played? Was the student able to participate in creating and playing the game?	Observation, encouraging, co-playing and doing
2	Does the student write and draw the cards like instructed?	Observation, comparing products
3	Is the student able to participate in the game?	Observation, peer-review of presentation materials
4	Are the students able to implement what they have learnt?	Asking, having a conversation close-up with the class
5	How do the students cooperate?	Observation, self-evaluation of groups / students.

NOTES / ACTIVITY SHEETS TO BE LINKED / EVALUATION MATERIALS TO BE LINKED

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REFERENCES / SUPPORTING MATERIALS TO BE LINKED

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