



4STEAM

Link to Resource	https://raiseprojecteu.files.wordpress.com/2020/01/4steam-workshop-plan-1.pdf																								
Target group	ages 8-12																								
Objective(s)	<ul style="list-style-type: none"> • Familiarize with different STEAM professions • Learn about the skills related to different STEAM professions • Learn about the 21st century skills associated with STEAM • Get to know real-life profiles of STEAM professionals • Learn to search for and integrate information • Integrate digital media into the learning process 																								
Summary	<p>4STEAM is a card game based on the concept of Quartet. The goal is to collect as many cards as possible – or ideally all. Each card in this game is based on the profile of one STEAM professional from Luxembourg while the game can easily be extended and complemented with more examples from all over the world. While playing 4STEAM, students discover in a playful manner various STEAM careers and the respective skill sets associated with the job with a strong emphasis on 21st century skills.</p> <p>Example:</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div data-bbox="568 1352 919 1814" style="border: 1px solid black; padding: 5px; width: 45%;"> <p style="text-align: center;">NIGEL RAMSDEN 45</p>  <p>Chartered Engineer</p> <p>«Do it - Engineers create wealth - other people just move it around»</p> <table border="0" style="width: 100%; text-align: center;"> <tr> <td>Biology 0</td> <td>5 Creativity</td> </tr> <tr> <td>Engineering 5</td> <td>5 Communication</td> </tr> <tr> <td>Chemistry 1</td> <td>5 Teamwork</td> </tr> <tr> <td>Mathematics 4</td> <td>5 Flexibility</td> </tr> <tr> <td>Physics 4</td> <td>5 Self-organization</td> </tr> <tr> <td>Computer Science 5</td> <td>5 Problem solving</td> </tr> </table> </div> <div data-bbox="957 1352 1308 1814" style="border: 1px solid black; padding: 5px; width: 45%;"> <p style="text-align: center;">LISA SMITS 39</p>  <p>Science Communicator</p> <p>«Find the balance between challenging and supporting yourself»</p> <table border="0" style="width: 100%; text-align: center;"> <tr> <td>Biology 4</td> <td>4 Creativity</td> </tr> <tr> <td>Engineering 1</td> <td>5 Communication</td> </tr> <tr> <td>Chemistry 1</td> <td>5 Teamwork</td> </tr> <tr> <td>Mathematics 1</td> <td>5 Flexibility</td> </tr> <tr> <td>Physics 1</td> <td>4 Self-organization</td> </tr> <tr> <td>Computer Science 4</td> <td>4 Problem solving</td> </tr> </table> </div> </div> <p>Each tile comes with basic information on the front required to play the game. A full interview from each STEAM professional is included into the resource pack (please see links in the materials section).</p>	Biology 0	5 Creativity	Engineering 5	5 Communication	Chemistry 1	5 Teamwork	Mathematics 4	5 Flexibility	Physics 4	5 Self-organization	Computer Science 5	5 Problem solving	Biology 4	4 Creativity	Engineering 1	5 Communication	Chemistry 1	5 Teamwork	Mathematics 1	5 Flexibility	Physics 1	4 Self-organization	Computer Science 4	4 Problem solving
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Materials	<ul style="list-style-type: none"> • Pintables of the tiles – choose to print 4 slides per page to get reasonably sized cards - https://raise-projecteu.files.wordpress.com/2020/01/4steam_tiles_vf_2-1.pptx • Tile templates for game extension - https://raise-projecteu.files.wordpress.com/2020/01/4steam_tiles_template_vf-1.pptx • Full interviews with all STEAM professionals presented in the game - https://raiseprojecteu.files.wordpress.com/2020/01/4steam_full-interview_vf-1.pdf <p>Extra material:</p> <ul style="list-style-type: none"> • PC with PowerPoint installed • Printer • Thick white paper to print tiles • Scissors to cut out the tiles • For game extension: PC/tablet with internet access and/or printed or digital literature about STEM professionals.
Preparation	<ul style="list-style-type: none"> • Print the tiles on thick paper. • Bring scissors
Duration	<p>60 minutes for playing the game 60 minutes for extension of the game</p>

Description

This card game is based on the principle of “Quartet”. Currently there are 13 cards in the deck while the game can readily be played and extended.

Each card represents one person working in a STEAM field and lists the respective skill sets of hard and soft skills required in his/her job such as f. ex: knowledge in biology/mathematics, creativity, self-organization etc. Each skill is ranked with a number from 0-5 where 0 means that this skill is not at all required in the job and 5 means the skill is heavily required.

To start, cards are shuffled and dealt face down between 2-3 players. Players hold their stack in a way that the upper card is visible to the owner. The player with the largest shoe size starts. From this upper card he/she chooses one of the listed skills and speaks out the respective value (1-5). Without showing their uppermost card - the other players speak out the value for that respective skill. The player with the highest value collects the cards from the other players and puts them at the bottom of his/her stack and continues the game. If there are two or more players with the same value for a given characteristic, the person on the left of the latest player chooses yet another characteristic on his/her card and the

comparison with the others continues. The player with the highest value collects the cards from the other players and puts them at the bottom of his/her stack and continues the game.

The game is over when one player has collected all cards. The game can be stopped at any time and the person with the most cards wins the game.

The game can be played either with ready made tiles or the activity can be made more engaging as pupils will create their own cards f.ex. one card per pupil representing STEAM professionals of their own choice where information can be acquired through online research or by carrying out interviews with local STEAM professionals and creating the respective cards. Collected information is then used to create the backside of the cards.

This will induce some nice discussion about STEAM & 21st century skills required for these jobs amongst pupils and should be facilitated by the teachers. The idea is that pupils eventually have familiarized with the lives / profiles / backgrounds of various kinds of STEAM professionals. For each STEAM professional in the game, a full detailed interview is available in the resource, which allows teachers to present one or more persons in more detail to their class and discuss their profession and required skills.