

BUILD A ROPE BRIDGE

General information			
Respective blueprint	Build a rope bridge		
Description	Students will make their rope bridge based on the inventions of Faust Vrančić.		
Learning objectives	<ul style="list-style-type: none"> • students will get to know Faust Vrančić's innovations • students will make a rope bridge • students will learn to cooperate in teamwork • by comparing, the students will understand the relationship between idea and balance through recycling different materials from the household 		
Related curricular subjects	Art, Mathematics, Physics, Polytechnic, Science		
Duration	135 min		
Level of difficulty	Basic	Medium	Advanced
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Inclusivity guidelines			
How to integrate students with SLD	<p>Teamwork with the help of the teacher or other students.</p> <p>Use colours to separate information and be consistent in your colour codes.</p> <p>Clear visual elements illustrate concepts and support the text without overloading them.</p> <p>Ensure that the images used match the text and are large and clear.</p>		
How to integrate students who work faster	Helping students who are slower in their work, creating a table on the blackboard in which data about teams and achievements will be entered		

Step-by-step description of the lesson

Step 1: Inventor of the rope bridge - introduction

Estimated time: 20 min

- Explain the term rope bridge and look at different types of bridges
- Students will learn about the innovations of the Croatian inventor **Faust Vrančić by looking at his drawings**
- Faust Vrančić was born in 1551. In Šibenik, Croatia and died in 1617. in Venice, Italy. He was a polymath, lexicographer, inventor and bishop.
- As a child, he attended school in Venice and then University in Padua, where he studied law, engineering, physics and mechanics
- One of the inventions is a rope bridge that the students will make themselves.
- Each team invents a name and chooses one type of bridge to construct

Step 2: Construct your rope bridge

Estimated time: 70 min

Making the bridges in teams of 3 students:

- Students make a plan for how to construct the bridge according to the chosen drawing and given materials
- Students divide the chores among the members of the group
- Students connect the pieces with tools
- Students test the balance of the construction with a small ball or toy car

Step 3: Presentation of finished works in teams

Estimated time: 45 min

Students present their work in front of the class.

Students answer the questions from the evaluation table on the blackboard: how well the team accomplished the terms (**completion, accuracy, balance, aesthetics, cooperation**) with +, - or 1/2?

The teacher asked the students about the task's difficulty, whether they had problems making the bridge and how vital that discovery was for the community and the future.

Assessment activities

Activity 1: Students fill out the evaluation table

Students present their work in front of the class according to the terms listed in the evaluation table on the blackboard. They self-evaluate their job and fill the table with **+**, **-** or **1/2**.

Attachments

- Evaluation table sheet
- Drawings of the bridges designed by Faust Vrančić published in "Machinae Novae" at Venice in 1615/1616.

References:

<https://www.morski.hr/nacrti-fausta-vrancica-inspiracija-za-mostove-u-dubrovniku-i-san-franciscu/>

Attachments:

Evaluation:

Self-evaluation of rope bridges in groups in front of the class according to the given

GROUP	1.	2.	3.	4.	5.	6.	7.
completion							
accuracy							
balance							
aesthetics							
cooperation							

Drawings of the bridges designed by Faust Vrančić:

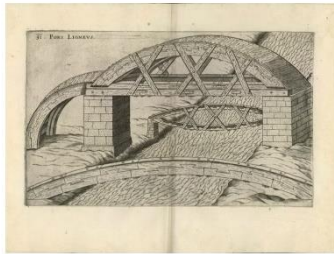


Photo: MC Faust Vrančić

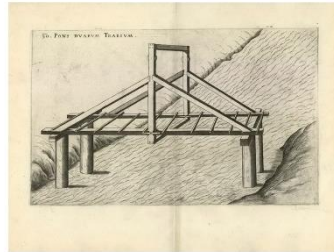


Photo: MC Faust Vrančić



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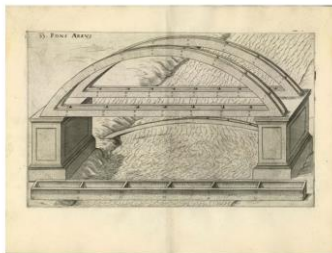


Photo: MC Faust Vrančić



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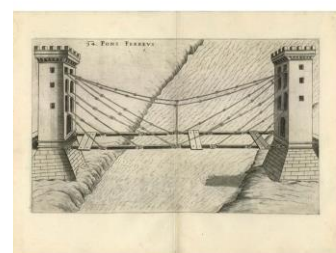


Photo: MC Faust Vrančić

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