

Using LEGO bricks to practice Taxonomy

Name of the object and creator	LEGO Taxonomy example Helena Valečić, biology teacher at Lovre pl.Matačića Elementary school				
Recommended ages	13-14				
Thematic areas combined (STEAM)	Science	Technology	Engineering	Arts	Mathematics
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Material needed	<ul style="list-style-type: none"> • Bag with different LEGO bricks (between 50 and 100 pcs) per group of students • Paper template for sorting groups and pen for each group 				
Outline of the steps	<ol style="list-style-type: none"> 1. Observing bricks and dividing them into groups regarding common characteristics. 2. After making the first groups of bricks, division inside groups of bricks. 3. Finally, students write the names of groups and bricks. 				
References	<p>(1) Using Lego to explain the process of creating Taxonomies and Ontologies for Document Categorization LinkedIn</p> <p>(2) Organising your LEGO Bricks - BRICK ARCHITECT</p>				

STEP BY STEP: How to build a Taxonomy sample with LEGO bricks

Step 1: How to group bricks?

Estimated time: 5 min

- Lego bricks are on the table, students discuss how to group bricks.



Step 2: Defining types

Estimated time: 10 min

After grouping bricks, each group of bricks should be divided into smaller groups according to common characteristics. Here is an example:

- Separate thick ones from thin ones
- Thin ones separate into two groups: one group - all angles are correct, second group - not all angles are right
- Now you have three types of bricks!





TYPE: THICK

TYPE:THICK – RIGHT ANGULAR

TYPE: THICK – NOT RIGHT ANGULAR

Step 3: Grouping inside type (regarding brick size)

Estimated time: 10 min

Continue dividing into even smaller groups. For example, divide bricks inside each type by size (number of the dots).

TYPE: THICK	SIZE:
	SIX DOTS
	FOUR DOTS (LINE)
	FOUR DOTS (ANGLE)
	THREE DOTS
	TWO DOTS



ONE DOT

Step 4: Grouping inside sizes by colour

Estimated time: 20 min

Each group size has bricks of different colours. In this phase, the division of the bricks can be based on colour.

SIZE	COLOUR
<p>SIZE 6 DOTS</p> 	BLACK
<p>SIZE 4 DOTS (LINE)</p> 	<p>GREY</p> <p>RED</p>
<p>SIZE: 4 DOTS (ANGLE)</p> 	<p>GREY</p> <p>WHITE</p>
<p>SIZE: 3 DOTS</p>	RED

	<p>GREY</p>
<p>SIZE: 2 DOTS</p> 	<p>WHITE</p> <p>GREY</p>
	<p>RED</p> <p>BLUE</p> <p>BLACK</p> <p>BROWN</p> <p>YELLOW</p>

Step 5: Final names of the bricks (species in taxonomy) | Estimated time:20

What would be the name of the last brick (circled)?
 The name would be TWO DOTS YELLOW
 In which type does it belong? Type: THICK

DISCLAIMER

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.



**Co-funded by
the European Union**