

Multilingual mathematics



Category	Choices																				
Title	Language of mathematics - Rekentaal - Rekkentaal																				
Objective	With this activity pupils learn the basic mathematical concepts and link these to the languages they speak at home.																				
Target group	First grades of secondary school																				
Subject	Mathematics																				
Duration	1 or 2 lessons																				
Link to curriculum	Linguistics Knowledge about multilingualism in general																				
Languages	All languages that are present																				
Link to FREPA	Awareness of the own language and of languages in the area Knowledge about languages in Fryslân, Europe and the rest of the world Knowledge about languages differences (vocabulary and structure)																				
Skills	Listening, reading, speaking, writing																				
Theoretical support	Translanguaging, language awareness, language comparison																				
Activity description	<p>Step 1 Hand out A4's, including the symbols of the count words and the related word. Pupils should find the right match. The half of the pupils has symbols, the other half has the words. For instance: one pupil has the word 'plus' and the other pupil has the symbol '+'. Step 2 Every pupil should get an A4 with one of the parts of the count word on it. Let them create words. Every pupil gets a piece of paper with a piece of the count word on it, divided in a prefix, a stem and a suffix. Pupils need to create a word. For instance: 'ver', 'menig', and 'vuldig' = vermenigvuldigen. Step 3 Combine step 1 and 2. All count words and symbols that form a pair need to be combined. Again, this task will be done by handing out A4s among the pupils.</p> <table border="1"> <thead> <tr> <th>Concept</th> <th>Symbol</th> <th>Meaning</th> <th>Expression</th> </tr> </thead> <tbody> <tr> <td>plus</td> <td>+</td> <td>Plus sum, increasing a number</td> <td>add to add more together adding</td> </tr> <tr> <td>minus</td> <td>-</td> <td>Minus sum, decreasing a number</td> <td>subtract to subtract less take away</td> </tr> <tr> <td>divide</td> <td>: / ÷</td> <td>A divide sum, decreasing a number</td> <td>divide to divide to part divide by</td> </tr> <tr> <td>multiply</td> <td>x</td> <td>Multiply sum, increasing a number</td> <td>multiply to multiply</td> </tr> </tbody> </table>	Concept	Symbol	Meaning	Expression	plus	+	Plus sum, increasing a number	add to add more together adding	minus	-	Minus sum, decreasing a number	subtract to subtract less take away	divide	: / ÷	A divide sum, decreasing a number	divide to divide to part divide by	multiply	x	Multiply sum, increasing a number	multiply to multiply
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Step 4

Create a language of mathematics word web with every count word that has been paired with the symbol. The pupils should sum this up.



Activity description

Step 5

The pupils should write down the words in the word web in their own language.

Step 6

Discuss the concepts in different languages. It is important to highlight:

- What words are the same?
- What is totally different?
- Does every language has a satisfying word for every count concept?

Materials

Newly created hand outs with symbols and terms

Examples from a newcomer school:

