



MA_Class_Totals_Multimodal

Teacher Education Design Principle + code:	9. Teacher education should enable teachers to make best use of and assess the various modes of expression and representation of science and mathematics learning to support inquiry and the development of creativity. TE: Multimodal
Specific Teacher Outcome(s):	9.2 Teachers should be able to make best use of children's preferred forms of expression and representation of their science and mathematics ideas to support inquiry and their creativity development.
Factors linked with:	P: Express
Type of material (image – interview (int) – classroom extract (class):	Classroom extract (class)
Originating from:	
Country report :	D4.3 – report Malta
Case:	Case 3
Episode:	3.2 Totals
Teacher:	Sabrina
Age Group:	5-6
Selected episode present in D4.4 Appendix	No



Supporting the children's different ways of expression and use of materials provided to solve mathematical problems.



Exploring alternative ways of generating a mathematical answer

The teacher starts talking about numbers adding to 10. She introduces 7 blocks, but she explains she wants 9. She writes the example on board:

$$7 + \underline{\quad} = 9$$

The teacher works out the example with the children using blocks. The teacher then works out a second example using blocks.

$$5 + \underline{\quad} = 8$$

The teacher then moves on to explain what group work the children are going to do. She gives each table some blocks, straws, beans and plastic cups. They also had two small sheets with examples that they had to work out. The children could choose to use any of the different things that they were given.

Group Work:

- **Blocks:** Most of the groups used the blocks. For example one group had $5 + \underline{\quad} = 7$. The two boys built two block towers, one with 5 blocks and one with 7 blocks. They then put them one next to the other and noted the difference.
- **Straws:** In the case of the straws, the children counted the number of straws that they had initially, and then counted on till they reached the total, in this case 8.
- **Beans:** The beans were very attractive and many were those children who played with them.

The children counted the number of beans in the first part of the sum. $4 + \underline{\quad} = 6$. So 4 beans were placed under one cup. Then they added 2 and with these they made a total of 6. They decided that the answer was 2.



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