



RO_Class_Measuring_volumes_non_standardized_units_Question

Teacher Education Design Principle + code:	11. Teacher education should enable teachers to use questioning effectively and encourage children’s questions in order to foster creativity and inquiry. TE: Question
Specific Teacher Outcome(s):	11.1 Teacher should be able to use different forms of questioning at appropriate points to scaffold creative learning outcomes in science and mathematics, and in particular to encourage children’s reflections and explanations, foster their independence and extend their inquiry.
Factors linked with:	AO: Creative; P:Ques; P: Agency
Type of material (image – interview (int) – classroom extract (class):	Classroom
Originating from:	
Country report :	D4.3 Romania
Case:	Case 4
Episode:	Measuring volumes: non standardized units
Teacher:	Sanda
Age Group:	5-6
Selected episode present in D4.4 Appendix	Yes





Teacher's questions guiding children's learning of process skills and understanding

T: The lesson of today is about measuring liquids. Who knows what the unit for measuring liquids is?

C: The liter

T: Yes, the liter is a measuring unit for liquids; today we shall not use the liter, but various other units. We shall measure water using glasses, cups, cylinders and bottles. What other liquids can we also measure?

C: oil.. vinegar.. milk.. juice.. beer.. tea.. wine..

T: Yes, very good. Let's see how we can measure water. We shall use the smallest vessels first. Look at these and tell me please if they are the same. **Calin**, would you like to pour the water from this tube into the little cylinder? **Calin** pour the water.

T: Did you pour all the water?

Calin: Yes the tube is smaller than the cylinder.

T: Now let's see the next experiment. You will pour water from the bottle in the cylinder till you will reach the last line on the scale.

Anca: The bottle is bigger than the cylinder because there still is some water in the bottle...

T: Yes, now let's see if the whole quantity of water in the cylinder can fill this glass on the table

Alex: The glass has been filled and I used the whole water from the cylinder

T: How these two recipients are, if the water from one of them can fill the other one?

Alex: They are the same, they are equal.

Sonia: In my glass is not the whole amount of water, there still is some water in the cylinder.

T: And what can you say about the two vessels?

Sonia: The cylinder is bigger than the glass.

T: And you **Didi**, did you manage to pour the entire amount of water from the cylinder in the glass?

Didi: Yes, all the water is now in the glass and there is still place to the edge of the glass.

T: 'What can you say about the two vessels? Are they the same, in terms of volume?

Didi: Yes

Andu: Nooo... the glass is bigger than the cylinder!

T: Now, you pour water from the cup into the cylinder.

Ana: The cup is bigger because there still is some water in it that does not fit in the cylinder.

T: Let's compare some other cups. You have water in the cylinder and now pour it in the cups. Does water fit in the cups?

Some children: They are the same, the water from the cylinder fits in the cup!



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