



## BE\_Class\_ColouringWater\_GWork

<b>Teacher Education Design Principle + code:</b>	15. Teacher education should promote teachers' use of group work to support children's inquiry processes and creative learning. <b>TE: GWork</b>
<b>Specific Teacher Outcome(s):</b>	15.1 Teachers should have knowledge of the value of collaboration for inquiry and creative thinking and learning. 15.4 Teachers should be able to use resources and teacher intervention appropriately to foster collaboration in science and mathematics.
<b>Factors linked with:</b>	<b>T: Ped;</b> <b>M: Var;</b> <b>M: Expl;</b> <b>M: Cr;</b> <b>P: Collab;</b> <b>P: Scaff</b>
<b>Type of material (image – interview (int) – classroom extract (class):</b>	Classroom extract
<b>Originating from:</b>	
<b>Country report :</b>	D4.3 – Belgium
<b>Case:</b>	Case 4
<b>Episode:</b>	Colouring water
<b>Teacher:</b>	Lies
<b>Age Group:</b>	5–6
<b>Selected episode present in D4.4 Appendix</b>	Yes



## Children collaborating

The activity was part of a bigger project about American Indians that the children had chosen to do. The children found out that some American Indians use natural dyes to colour their clothes, so the children first explored how to dye cotton fabric and later on they made their own clothes.

This data focuses on four girls who chose to work in the corner where they were dyeing pieces of cotton fabric with dyes from natural products. On the table were a rich variety of materials, such as oranges, grass, herbs, coffee, tea (also rose hip tea), funnels, sieves (in different sizes), cutting boards, scissors, cups and knives. The children were also allowed to go outside to collect more natural materials if they wanted to do so.

To scaffold the children's technique for extracting the dye the children were given an instruction card with pictures showing how they have to handle the natural materials and how to separate these materials from the colored water to extract the dye. Lies only interacted when necessary or when the girls explicitly asked for her help.

The children were given the freedom to select the materials themselves and two of the girls decided to go outside to collect more grass and mud for their investigation.

Although the children had an instruction card to guide them, they were allowed to plan their own investigations, for example, they had to choose which sieve to use by investigating which size was most successful at separating the materials from the water. Indeed, one child chose not to sieve her coloured water at all. They could also choose how long to leave the cotton fabric in the water and one girl left her cotton fabric longer in the water and she noticed the colour deepened the longer it was in the dye.



# creative little SCIENTISTS

Based on the conversations between the girls it is also clear that the teacher encourages collaboration and dialogue. For example on the picture two girls are working together. They are trying to extract colour from the peel of oranges. They also discuss how big the pieces have to be. They search together for the best sieve.

Also in the other groups there is a lot of collaboration and discussion between the children. Although this results in some noise in the class, it also creates some very interesting conversations.

*Girl 1 is still cutting with her tongue out of her mouth. Girl 3 is saying 'Little pieces' to her.*

**Girl 1 to Girl 3** 'But my fingers are almost broken.' *Girl 1 and Girl 3 are cutting further.*

**Girl 1** 'I'm curious what color this is going to be.'

**Girl 2** 'I'm also curious.'

**Girl 1** 'With you, it will turn yellow.' *She is pointing to girl 2 who is working with the curry.*

**Girl 2** 'That really stinks.' *Girl 2 is giving her cup to girl 1 who smells. .*

**Girl 3** 'And soon we are going to put a little water in it.' *She looks at the instruction card.*

**Girl 1** 'Later on we will bring water in it.'



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The project CREATIVE LITTLE SCIENTISTS has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) for research, technological development and demonstration under grant agreement no 289081.