FI_Class_Volcano_SocialAffectAims

Teacher Education Design Principle + code:	1. Teacher education should provide content knowledge about science and mathematics, including interesting and current topics, to be used in activities linked with everyday life. **TE: SocialAffectAims**
Specific Teacher Outcome(s):	1.1 Teachers should be able to pursue the social and affective objectives of children's science and mathematics learning, in synergy with the corresponding cognitive ones. 1.2 Teachers should be able to make children aware of connections between science and mathematics learning and their everyday lives, in order to engage their motivation, interest and enjoyment in science and mathematics and foster curiosity and creativity.
Factors linked with:	**AO: Affect** **AO: Social** **P: Affect**
Type of material (image – interview (int) – classroom extract (class):	Classroom
Originating from:	
Country report :	D4.3 - Finland
Case:	Case 3
Episode:	Volcano
Teacher:	Rita
Age Group:	3-6
Selected episode present in D4.4 Appendix	No

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.

Importance of social and affective factors with cognitive one

Firsty, the children created the paper volcanos themselves. Secondly, they conducted an experiments with everyday ingredients with teacher (like a child led demonstration). The children became familiar with ingredients and shared their knowledge about the use of those substances.

Teacher: What is this (showing sugar/salt/soda)? How you can use sugar/salt/baking soda?

Teacher and children think of examples of how to use ingredients.

Teacher: You can use SALT, where?…
Children:

- in food
- in healthy food

Teacher: Why is it important?
Child: It gives flavour.

Teacher presents vinegar and asks how to use it and hands out mugs.
Children's answers for baking sugar:

- in baking
- in coffee
- in buns
- in ice cream
- in cakes

You can use BAKING SODA…

- in cakes

Teacher: What's this (VINEGAR)?
Children:

- ketchup
- blood

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- oil

Teacher: You can use VINEGAR…
Children:

- in mothers beetroot soup

Teacher: in preservation, for example in pickled cucumbers or in dressing

After knowing the ingredients, children move to another side of the table and teacher shows them the worksheet where they can mark their predictions when mixing dry ingredients with vinegar. Teacher explains how children should fill in the form. Children make their first prediction of what's going to happen when they mix vinegar and sugar.

Teacher: Everybody think for themselves. Ask if you don't understand.

Children measure sugar in to the volcano and Teacher gives them vinegar.
Teacher lets children to smell the vinegar.

Children: Terrible smell.
Teacher: Who knows how much there's vinegar in this dish?
CHILDREN: 600 litres, a litre, half litre
Teacher: The size of milk bottle is one litre. Is this the same size?
CHILDREN: No.
Teacher: This is one deciliter and you can put ten of them in one milk bottle.

Experiment continues and next the Children measure salt in to the volcanoes and teacher gives them vinegar.

Teacher: How did we work in the first case?
Child: You will give permission and then we carefully pour.
Teacher: Yes! And then?
Child: We turn backwards.

Teacher asks the children how they should work with the ingredients and then gives permission to pour vinegar.

Children: Nothing!

Nothing happens and the children mark the outcome in to the paper form. Next they mark the predictions for the last pair of ingredients (baking soda and vinegar). Children measure baking soda into the volcanoes and teacher gives them vinegar. Teacher asks them to move the volcanos in the middle of the table. Children pour the vinegar and look happy and excited when the volcanos boil over. Also the audience seems to be very excited.
Children Laughing.

Teacher: Did you manage?
Children: Yes.
Child: My Volcano can boil over once again!

Lots of fun and happiness among the children in the end!
The teacher presented/explained shortly why the volcanos boiled over.

Teacher: Soda and vinegar react together and produce carbonic acid, which makes our volcanos boiling. All ingredients do not react similarly.

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