

UKEN_Class_Waterproof_Materials_CreatInqPed

Teacher Education Design Principle + code:	7. Teacher education should familiarise teachers with a range of formal and informal inquiry- and creativity-based learning, teaching and assessment approaches and strategies and their use in relation to authentic problems within the areas of science and mathematics. TE: CreatInqPed
Specific Teacher Outcome(s):	7.5 Teachers should be able to use a range of creative contexts and approaches for provoking children's interest, motivation and enjoyment in science and mathematics, such as stories, poems, songs, drama, puppets, games. 7.6 Teachers should be able to use strategies for making and building on science and mathematics real life connections and applications for engaging creatively young children in science and mathematics learning.
Factors linked with:	P: Affect; M: Cr.
Type of material (image – interview (int) – classroom extract (class):	Classroom extract (Class)
Originating from:	
Country report :	D4.3 UK (England)
Case:	Case 11
Episode:	Waterproof materials
Teacher:	Emily
Age Group:	5-6
Selected episode present in D4.4 Appendix	No



**Setting a motivating context for investigation
Making links with everyday life experiences**

The session on *Waterproof Materials* was part of a half term science-based project on materials. The context for the session was the need to select the best material to make an umbrella. Emily began the lesson by talking about the class puppet MAX who needed a new umbrella because he had left his on the bus. Emily then explained that MAX wanted to see them as real scientists who can record. She showed the sheet for recording and emphasised the task was collaborative. They needed to work out how to carry out their investigations, share tasks between them and agree on the findings in order to give advice to MAX.

**Reflecting on findings and their applications
Making real life connections**

In reviewing their investigations Emily asked the children to share their conclusions about which materials would not make a good umbrella and to explain their ideas drawing on their observations.

Emily: Can you tell me what the puppet should NOT use?

James: Blue fabric?

Emily: What was the matter?

James: The water went through.

Charlie: Foil - no. *(Some of the children agree).*

Chloe: Don't use newspaper.

Emily: Why?

Chloe: Holes?

Emily then commented that you see a newspaper on people's heads when it's raining if they don't have an umbrella and asked '*Why does this work?*'

Dan: Because if you have so many bits it is very strong and water doesn't go through it. It would work for part of the day but then would soak through if it was used all day.

Emily: What else would we not use?

Sophia: MAX should use plastic.

Several children agreed. The children continued to discuss what might make the best material for an umbrella, suggesting ideas about other properties that might be important.

Billy: Sugar paper - it went through.

Emily: So we've got some saying yes to plastic.

Emily: Why?

Clara: What's good is it runs off and it doesn't stay on it. Plastic is good.

Emily: What 's good about foil?

Leo: You can't see where you are going. You might crash into people.

Jodie: But foil is sparkly and will make a sparkly umbrella.

Grace: But plastic is better as an umbrella because you can put it down rather than foil. Foil gets all scrunched up.

Emily: Fantastic thinking that makes lots of sense. Which is stronger?

Benjy: Plastic when you pull it will stretch.

Emily: MAX will read all the scientific reports and see what you found out. The more you tell me the more help he will get.



© 2014 INSTITUTE OF EDUCATION, UNIVERSITY OF LONDON

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/>.



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.