



MA_Class_Waterproofing_NoS

Teacher Education Design Principle + code:	3. Teacher education should advance teachers' understandings about the nature of science and how scientists work, confronting stereotypical images of science and scientists. TE: NoS
Specific Teacher Outcome(s):	3.2. Teachers should be able to recognize young children's capabilities to engage with processes associated with the evaluation as well as generation of ideas in science and mathematics, since these processes are also important for the development of learner creativity.
Factors linked with:	P: R and R
Type of material (image – interview (int) – classroom extract (class):	Classroom extract (class)
Originating from:	
Country report :	D4.3 – report Malta
Case:	Case 5
Episode:	5.3 Waterproofing
Teacher:	Gillian
Age Group:	7-8
Selected episode present in D4.4 Appendix	No





**Making predictions and reflecting on evidence
created to evaluate the generated ideas;
Following up the children's ideas with experiments**

The teacher then distributes a worksheet to the children and asks them to go through the examples. The children are asked to predict which of the materials presented they think would be a good material to use as a hat to protect a boy from getting wet.

Gillian: We have a container of plastic covered with the material (*paper napkin*). What do you think is going to happen if I were to pour water on it? Does the water go through it?

Child: Yes.

The teacher tries it out. The children say in chorus:

Children: Yes!

Gillian: Now we try paper...do you think that it is waterproof?

Child 2: Of course not!

The teacher pours water and the children notice that the water passes through the paper into the container. The children shout with delight as they had predicted correctly. The activity went on trying out different materials e.g. cloth, sock, tin foil, cardboard etc. Cardboard was the most controversial example as the children disagreed on whether they thought it was waterproof or not. The cardboard dilemma required further investigation as some children predicted that if they leave it to set for some time the water would eventually pass through it. After trying it out they concluded that in fact it did and therefore was not waterproof.

Comments:

The extended experiment with the cardboard clearly demonstrates how children were not only conducting the experiment but also given time to evaluate its progress. After some debates the children decided that the cardboard needed to be soaked in water for a longer period of time. Thus this episode illustrates how the teacher recognized her students' capabilities to conduct inquiry activities, evaluate its progress and generate ideas concerning science. The students who knew that the cardboard paper leaked water could demonstrate this idea to the other students who thought otherwise, engaging both groups of students in creative learner.



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