

Teacher Education Design Principle + code:	17. Teacher education should address with teachers issues in ensuring rich provision, planning and use of resources (including digital resources) in and out of the classroom to support children's inquiry and creativity.
Specific Teacher Outcome(s):	17.7 Teachers should be able to develop the school grounds and the outdoor classroom for use in science and mathematics education.
Factors linked with:	M: Outd.
Type of material (image – interview (int) – classroom extract (class):	Classroom
Originating from:	
Country report :	D4.3 Greece
Case:	Case 6
Episode:	6 – Branches, Leaves and Pine Cones
Teacher:	Katia
Age Group:	4-5
Selected episode present in D4.4 Appendix	No

Using the school outdoor grounds to explore early numeracy concepts

This activity took place at the start of a three-day lesson which aimed at developing children's pre-numeracy knowledge and skills: understanding of simple space and time concepts, such as big-small, wide-narrow, long-short, before-after; use of mathematical language; making comparisons and classifications.

The children had to go around the school outdoor grounds and collect tree sticks, leaves and pine cones, which they then had to sort out into long and short, wide and narrow and big and small respectively. The purpose of the activity was to collect suitable material for a hedgehog to build its nest. The activity was presented in the context of a story taken from a children's book titled "Ouch!" (Scammell and Terry, 2006) about a hedgehog trying to get into its nest to sleep for the winter (hibernate). The following day the children acted out the story using some of the materials gathered. The third day (few days later) the children were asked to work in groups of four and put the same materials in order of size (the pine cones), length (the branches) and width (the leaves).

The images below depict the collection of the materials and children's attempts to classify them. The children had to work in groups, with each group tasked to collect specific kind and size of materials. During the activity some children thought that they had spotted a tortoise's shell under a bush, only to realise that they had instead found a different kind of cone, a cypress cone. Lively exchanges occurred between the children and the teacher about whether the materials gathered were 'small' or 'big', 'long' or 'short', 'wide' or 'narrow', preparing the ground for discussion about relative sizes, as part of the third-day lesson.



Examples of materials to collect and containers to put them in

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Children busy collecting and sorting materials



A long stick together with the other long ones.



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'Mrs Katia, come to see, we found a tortoise's shell.'



'Can't you see? There it is.'



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