

<b>Teacher Education Design Principle + code:</b>	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. <b>TE: CreatInqPed</b>
<b>Specific Teacher Outcome(s):</b>	7.7 Teachers should be able to assume a variety of roles in their interactions with the children e.g. allowee, leader, afforder, coordinator, supporter, tutor, motivator and facilitator, to support children's creativity and inquiry in science and mathematics. 7.8 Teacher should be able to use a variety of scaffolding techniques to promote creativity in science and mathematics, from standing back in order to observe, listen and build from the children's interests, to intervening with appropriate questioning to support and extend inquiries. 7.9 Teachers should be able to use different assessment approaches and strategies and in particular those that involve children in the assessment processes, such as peer and self assessment, dialogue and feedback on progress, in the early years science and mathematics classroom.
<b>Factors linked with:</b>	<b>A: Peer/Self;</b> <b>P: Dialog;</b> <b>P: Scaff;</b> <b>P: Quest</b>
<b>Type of material (image – interview (int) – classroom extract (class):</b>	Classroom
<b>Originating from:</b>	
<b>Country report :</b>	D4.3 – report Romania
<b>Case:</b>	Case 5
<b>Episode:</b>	Natural phenomena
<b>Teacher:</b>	Cora
<b>Age Group:</b>	7-8
<b>Selected episode present in D4.4 Appendix</b>	No

**Pupils' engagement in science learning is triggered by questions and a permanent dialogue with peers and teacher.**

In this way, children's interest on the subject, curiosity and motivation are supported. During all these interactions, the teacher changes roles permanently from tutor to observer, advisor, evaluator, consultant, active participant. In this manner, he/she is able to judge children progresses from various perspectives: content knowledge, process skills, communication capabilities, social relationship, ability to handle materials. In some cases, it is useful to encourage students to self and/or peer assessment.

**T:** We shall speak about natural phenomena and your task was to make some drawings or to look for images that illustrate them. Could you find some? Mara please, can you show us?

**Mara:** I like lightning, I brought a picture ...

**T:** Yes, very good. When the lightning is produced?

**Mara:** The lightning is produced during storms, when it is a lot of electricity in the clouds.

**T:** Yes, good. Who want to present another phenomenon? Yes Daria, what natural phenomenon did you choose?

**Daria:** I chose the rainbow, I like it!

**T:** very good, could you tell your colleagues what the rainbow is? It is really difficult to understand what happen in the sky, when it becomes coloured...

**Daria:** Yes, it is something with little drops of water in the sky and the sun... it is after the rain... and it is very nice...

**Alex:** I chose rain.

**T:** Yes, very good; when it is raining a lot, in what season?

**Alex:** In spring and in autumn, and sometimes in winter.

**T:** Yes, you are right, in winter when temperatures are higher it rains, it does not snow.

**T:** Who can tell me what the seasons are?

**Doru:** There are four seasons: winter, spring, summer, and autumn.

**T:** Now you shall receive a worksheet where four trees are presented and you have to colour them according to their appearance in each season: you have to imagine how the tree looks like in spring, in summer, in autumn and in winter.

**Mara:** In spring the trees are blossoming! I shall colour some pink flowers..

**Alex:** I shall colour some red fruit for the summer and some green leaves

**Daria:** For autumn I shall colour using brown, yellow and red for the tree, these are the colours of the autumn...

**Radu:** In winter there are no leaves no more, I shall colour in brown only the stem and the branches of the tree... and on the ground I shall leave uncoloured because it is snow...

**T:** Yes, very good; please start colouring!

**T:** We shall stop here and you will finish to colour the trees at home. Now, what can you say about the weather of today? We have to register on our worksheets 'The calendar of the nature'. You have to select from the legend what is the most appropriate symbol for today

**Sandu:** It is cold... I was cold...

**Lia:** And there are a lot of clouds

**T:** Yes, it is cold and many clouds are on the sky. What about the wind?

**Laura:** It is wind, but not so strong...

**Dona:** it is raining now...

T: Yes, very good, now please draw on the worksheet what do you think it is specific for expressing the weather of today.



After discussing about natural phenomena, children either fill some worksheets or color the 'Calendar of Nature'. In this way, in addition to the information obtained through the dialog with pupils, the teacher has the opportunity to assess their individual knowledge and understanding of the subject by observing their class work and by evaluating the worksheets content and quality.



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