

From game to science through laboratory experiment

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Justification

The programme has been recently introduced and it trains teachers in order to successfully use experiments during Science classes in primary school education.

The misunderstanding of some phenomena and the improper manner in which they can be explained to children in an attractive way, determine students not to consider Science a subject of main priority.

This aspect has been demonstrated by the weak results that students had at the National Evaluation for the 4th grade.

Purpose

- To emphasize the importance of experiment in Science classes and to develop skills in order to properly conduct experiments with students.
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Objectives

- The observation and interpretation of the natural processes that take place in nature;
- The investigation and interpretation of the interdependencies between biological, physical and chemistry systems;
- The use of certain methods that allow students to take part in the experiments;
- The formation of certain skills that allow a proper use of the scientific language;
- The connection between individual activities (documentation from various sources, individual observation, individual exercise, individual work and experiment, etc.) and group activities (team work);

Questionnaire for teachers

- 1. Do you consider that teaching science to primary grades is important?***
- 2. Do you make an additional effort in preparing a science lesson in comparison with a lesson for another subject?***
- 3. Do you often use experiment during science lessons?***
- 4. What difficulties do you encounter in preparing science lessons based on experiments?***
- 5. Are your students more receptive to theoretical or practical lessons?***
- 6. What do you think should be changed for a better impact on primary school students?***

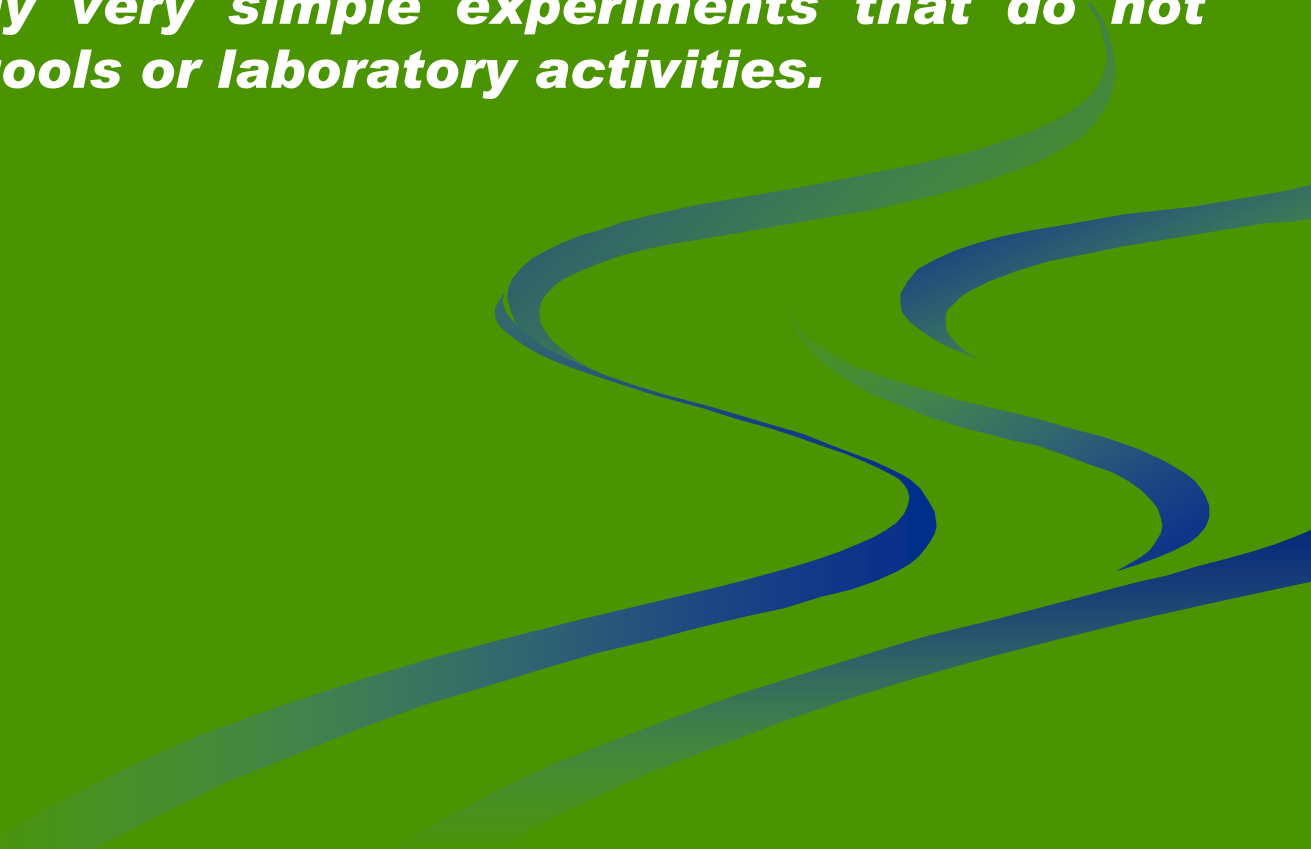
Do you consider that teaching science to primary grades is important?

- *I consider that it is one of the most important subjects, as it helps children to understand certain phenomena and be more aware of what happens around them.*
- *I find it difficult to teach this subject because I do not understand certain phenomena and I am afraid that students will ask questions that I will not know how to answer correctly.*
- *Generally, students' parents are interested in subjects such as Romanian language and Mathematics, Foreign languages, History and Geography and, in the end, Science. Taking into account their preferences, I have adapted to their priorities.*

Do you make an additional effort in preparing a science lesson in comparison with a lesson for another subject?

- ***We have to make an additional effort only in some situations, especially when it comes to lessons that are based on experiment or when it comes to lessons that are based on physics, chemistry, anatomy or zoology.***
- ***I do not make additional efforts because I usually use the textbook which contains images and sometimes very clear explanations.***

Do you often use experiment during science lessons?

- *Sometimes, if time allows me to prepare.*
 - *I conduct experiments only if I have the necessary materials.*
 - *I conduct only very simple experiments that do not need special tools or laboratory activities.*
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What difficulties do you encounter in preparing science lessons based on experiments?

- *I do not encounter difficulties in preparing science lessons because I do not conduct experiments. I consider that we do not have enough time to do this type of activities because the Science class is only once a week.*
- *I encounter difficulties when it comes to conducting a complex experiment, because I do not have the proper place and enough materials.*
- *I encounter difficulties in preparing lessons based on experiment because I am not well trained and I did not have the opportunity to take part to a training course.*

Are your students more receptive to theoretical or practical lessons?

- ***Students are more receptive to practical lessons and more interested in experiments.***
 - ***My students would like to learn science by playing certain games.***
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What do you think should be changed for a better impact on primary school students?

- ***The subjects should be more attractive and the textbooks should be more accessible (they must have interesting images and must present clear aspects).***
- ***A guide should be enclosed to every textbook in order to clearly explain the steps of the experiments.***
- ***The location of the Science class should be changed to the Science laboratory, a special room or any place in the nature...***
- ***Training courses should be organized in order to solve the issues.***