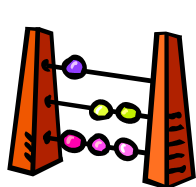


EARLY YEARS NUMERACY PROGRAMME (EYNP)

Implementation of the model for mathematic competence
at Mørkved primary school, Brumunddal, Norway



"Systematic learning organization in stations makes it easier to have adapted and problem solving teaching. The pupils are orally active and will discuss mathematic in another way than in traditional classrooms situations"

Sigve Tjomsland, Nylund primary school, Stavanger, Norway

Numeracy is knowledge and skills which are needed for handling mathematic challenges in different situations in an effective way.

- EYNP have two different lessons every week
- The youngest pupils have 6 stations every time
- For the oldest pupils we can combine different stations
- Every station last approximately 12 minutes
- The stations can change depending of age and need
- The lesson starts with a common introduction for everyone. The day's work is discussed for about 5 to 10 minutes

The six basic stations are:

- guided station with a teacher
- working station
- digital station
- Geometry- and measuring station
- problem solving station
- repetition station

A brief description of the four stations:

Guided station with a teacher:



This is the only station with a teacher. The pupils have a possibility to discuss different mathematical issues with other pupils, and in that way the teacher will get insight in the pupil's understanding. The teacher will have a possibility to challenge their understanding in such a way that the pupil's see new aspects of the subject. The teacher has a possibility to find out possible misunderstanding and give the pupils guidance and support in their future learning. In this group the teacher spend a lot of time to challenge the pupil's understanding.

Working station:



The tasks at this station are directly connected with the topic at the guided station. When new issues are introduced by the teacher at the guided station, the pupils will go to the working station directly after that. They will remember what the teacher told them, and they are able to work without help. They are working with different kinds of tasks like problem solving and skill training.

The task station can also be the last station before the teacher station. The pupils can then take the work they have just carried out and explain to the teacher what they have done and how they intend. The teacher is thus familiar with the individual pupil's problem solving strategy, and any misconceptions can be eliminated. The pupils will reflect articulate what they have worked with, and their understanding will be further strengthened.

Problem solving station:



A separate problem solving station provides a guarantee that the pupils get time to work systematically with the topic. Problem solving is a central issue, and it can not only be limited to one station. Problem solving tasks extends far beyond the traditional text pieces in the textbook. The pupils can be given tasks without number, for example:

"Per and Kari are going to buy ice cream and soda. How much money do they need?"

The pupils can then create their own tasks or find different stories or contexts to a calculation. They can also work on math problems from their daily life or special projects that they are in to. The problems at this station can also be used to promote pupils activity in learning. In advance of introducing a new subject the teacher has the opportunity to give the pupils problems related to what they are going to learn.

The American mathematician Van de Walle emphasizes problem solving as a teaching strategy.

"Most, if not all, important mathematics concepts and procedures can best be taught through problem solving".

Problem solving may need more time than 12 minutes. It can be necessary to give the pupils more time at this station.

Digital station:



This station has a double function:

The pupils shall learn to use ICT as a tool to learn basic skills. On the other hand we have a lot of pedagogical programs both for single computers and via internet. The teacher, and step by step the pupils, choose normally programs that fit together with the teaching issues on the guided station. In this station the pupils develop digital and subject competence.