Mathematics Enhancement Programme
Primary Demonstration Project
Reception Year

Introduction

This Reception Year mathematics programme provides detailed lesson plans along with OHP transparencies and copy master material for reception year teachers. These pictures and worksheet figures are from the Reception book printed for the Centre for Innovation in Mathematics Teaching

Hajdu, S. Dr. - Scherlein, M.: Mathematics R - Reception class,
Müszaki Publishing House, Budapest, 1998

This book is the English version of the Hungarian original which was produced for kindergartens in Hungary.

Hungarian 5+ year-old children must attend a school preparatory year in kindergarten where they usually have two mathematics 'lessons' per week, each of 25 - 30 minutes. The use of several sheets from this material with UK children at least one year younger in reception classes needs sensitive attention and methods.

Teaching philosophy

1. Learning via playing. In optimal cases, children will wish to participate in the games, plenary tasks and discussions, in recitation and singing; they will enjoy acting in front of the class (perhaps role-playing), will be happy to work at the black or white board, screen or poster, will like taking part in physical games, and enjoy playing with toys and other materials both in groups and individually and will be keen to draw and paint. Be patient and do not force a child to participate if he/she does not wish to take part in an activity. Aim to involve each of them in some way. (Translation of the Hungarian name of these kindergarten lessons is 'initiatives'.)
2. We should avoid any articulated requirement in mathematical knowledge, although we have clear aims behind our methods. But, gradually, require good behaviour, attention, concentration, activity, collaboration and communication. The course is very structured on the teacher's side, but the children need not see that; they should feel free and have fun in a familiar atmosphere. The teacher should look for prompt but simple feedback (correct and exact), while for special or outstanding attempts (except counting up to n>10 and reading or writing digits) and manual or art productions use greater praise (well done, good boy/girl, brilliant, fantastic) or a prize.
3. Interactive whole class sessions and group, paired or individual work and play occur in each lesson. With an assistant, group work in turn is useful. For example, place 1: free choice (but mathematical) playing (construction, building,

marble lacing), place 2: free colouring or drawing, place 3: individual work on sheet, place 4: interactive work, instructed by the teacher.

4. Mathematical content: orientation, compasses, various relations, mental counting up to 10 (even if many can count higher), number sense, decomposing numbers, preparation for operations, 2D, 3D shapes, parts, symmetry, reflection, sequences, patterns.
5. No reading and writing of digits (even if children have learned some at home or from friends). Finger joints are not ready yet for writing. Fine motor practice e.g. rolling ribbon and paper tape, 'playing the piano'. There are several worksheets with letter and digit elements for drawing over. With these, children are prepared gradually for writing in Year 1. These sheets should be enlarged for children aged 4+.
6. Logical or systematic thinking and abstraction are not expected at this age. This course is for you to determine, while they work/play, what your pupils can and cannot do. You are also a researcher who should patiently observe their activities, measure the development of their abilities and discover the personal or general obstacles to their learning. But we have to be responsible for them, so stop any activity the children are not enjoying. Be patient, you have a lot of time to reach your goals.

On the lesson plans

These lesson plans are suggestions. It is recommended that you follow them in one, or, preferably in two, consecutive years. Then, after understanding the principle and structure, you will have enough experience for modifications or for your own innovations. You may do 2 'lessons' per week or do them in weekly blocks (5 lessons) in every second week.

What to do in other lessons?

What you used to do before. A lot of playing, constructions, drawing, colouring, painting and games. Work with items such as pebbles, acorns, shells, leaves, etc. Collected or hand made worksheets are useful with the most popular type of tasks. Role play, situation play (e.g. shopping at market or in shop), motional activities, e.g. turning toward compass points, counting own ears, eyes, fingers; ordering children in lines as patterns or ordering from taller to shorter, etc.