

Problem Solving, Reasoning and Number

In the Reception Unit there are three distinct age groups, 3 year olds, rising 4's and rising 5's.

The children have opportunities to learn and progress at their own pace. Each stage of learning is built upon as the children progress. The youngest children learn through play and experiences, and opportunities for learning are taken with the children during both indoor and outdoor play. Concepts covered include:

more and less, when counting toys

number when putting out place mats for fruit time

capacity and weight when playing with water and sand,

the wonder of patterns when threading and using peg boards,

measuring during craft activities,

money during role play to recognise coins, buy things and give change.

sorting when clearing away,

number when singing rhymes and songs, laying the table for toys picnic and

from watching and listening to the older children,

position when describing where an item is or who is sitting opposite at lunchtime.

Looking at the clock to tell when it is "tidy up" time, lunch time or home time,

When they are ready, rising 4's start to work with numbers to 5 using Number zoo as a starting point. Lots of practical work is available using beads, toy animals, counting games and songs, craft work and paintings.

The children are taught correct number formation and offered practice with crayons, pencils, felt pens, white boards, chalks, paints, modelling clay etc.

Other concepts are taught as opportunities occur and when it is considered the children are ready to learn and progress.

Rising 5's start to work towards the Foundation Stage Profile which is completed at the end of the year.

Learning Objectives

1. To develop awareness of the order of numbers 1 to 10.
2. To develop recognition of numbers to 10 and then 20
3. To promote pupils counting, sorting, matching and ordering skills.
4. To encourage pupils to write numbers 0 to 10 with confidence and using the correct orientation.
5. To introduce mathematical concepts for shape, space order, measure, weight and position.
6. To develop vocabulary and pupils' use of mathematical language.
7. To use language to describe the size and shape of 2D and 3D shapes.
8. To be able to compare quantities and use appropriate language for measure, weight and capacity.
9. To begin to use money, recognise coins and use in role play to buy things and give change.
10. To understand time, days of week, months of year and time, o'clock and half past..

Activities

Use songs and rhymes to introduce numbers 1 to 10, act out using appropriate apparatus, individual numbers and number rhymes.
Make pictures, collages and models of the songs and rhymes to use as counting apparatus eg. Hickory dickory dock make clocks with one mouse to run up and down.
Encourage one to one correspondence and awareness of number order using sets of beads, cubes, pegs, natural objects, picture cards etc.
Find and match written numbers to sets of objects.
Listen to and make up number stories together using toys as a stimulus.
Play sorting and matching games with sets of objects.
Use number jigsaws, dice and board games to reinforce learning in the above activities.
Use simple worksheets, sponge printing and stamps for children to support and record their learning.
To explore properties of sand and water I.e comparing capacity, weight of dry and wet sand
Measuring using cubes, tape measures or comparing height on growth chart
Weighing using balances or scales
Heinemann Number Zoo scheme used to introduce numbers 1-5 and supported with practical activities using the animals to encourage pupils to recognise and explore the numbers.
Link to art work to assist number formation and develop individual number concepts.
Counting with toys.
I.T. -Use of number games

Differentiation

Pupils to work at own levels throughout their time in the Reception Unit.
Adaptation of practical activities, Number Zoo worksheets and extension activities to be made according to individual needs of pupils depending on their abilities and understanding of the mathematical concepts being developed.
Adult support to complete activities as appropriate.
Extension work always available
IEP written if needed.

Assessment

Each child's progress is followed and developed with teacher observations and recorded in individual Learning Stories
Pupils work commented on, dated and filed.
Verbal praise and stickers given on individual merit
Photos taken regularly and stored
At the end of Year R Foundation Stage Profile is completed.
Mathematical language and understanding assessed when children start.

Resources

Heinemann Number Zoo Scheme
Beads and laces
Pegs and peg boards
Sorting trays and apparatus
Unifix cubes, boards and number apparatus
Jigsaws
Number games, dice and board games
Number songs and rhymes
Number songs and rhymes cassettes
Soft toys
Number cards
Large number squares
Paint
Art and craft materials
Feely cards
Magnetic numbers
Plastic numbers
Number sponges
Computer
Learning Ladders and Reader Rabbit programmes
Extension sheets