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REPORT FROM THE PANEL ON ADULT LITERACY, NURSERY AND PRIMARY

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REPORT FROM THE ADULT LITERACY/NURSERY AND PRIMARY PANEL

GENERAL INTRODUCTION AND PREAMBLE

The statement of aims and objectives from the Fist Education Coun[illegible] of the ANC (SA) (1978) provide the political framework within which this panel undertook its task.

These aims and objectives were:

1. To prepare cadres to serve the national liberation struggle of the people of S.A., in the phase of struggle for seizure of political power.
2. To produce such cadres as will be able to serve society in all spheres, i.e. poltical, economic, socio-cultural, educational and scientific. Priorities will be dictated by the needs of the liberatory struggle in the pre and post liberation periods.
3. Educational policy should be geared towards producing a new type of South African dedicated to serve the interests and needs of the South African people as a whole.

The acceptance of this policy strongly affects both the content and the teaching organization and ethos for our school.

Bearing in mind these objectives, and following the notes produced [illegible] its guidance, the panel saw its brief as providing guidelines for the organization and curriculum of the three educational areas allocated to it, namely, adult literacy, nursery and primary schooling.

Since the terms of reference are very wide, the panel agreed to treat each area under the following six broad headings

a. objectives
b. methodology
c. course content
d. teaching aids
e. evaluation, assessment and record keeping
f. staff induction and development.

ADULT LITERACY

1. OBJECTIVES

i. To enable comrades to read and write propaganda material pamphlets, speeches and other publications
ii. To enable comrades to compile a report
iii. To enable comrades to do basic calculations, computations and geometry to facilitate training
iv. To teach as many African languages as possible, including Afrikaans, alt ough the medium of instruction is English from quite early on.

Short term objective — mother tongue instruction
Long term objective — instruction in English with as many African language as possible also taught.

2. METHODOLOGY

Basic Approach

i. Small group instruction in groups of no more than twelve, but often smaller due to large number of volunteers and helpful comradely spirit (see Evaluation and Staff Induction sections further on).
ii. No rigid cut off point for transfer from African languages to English. Depends on individual progress. No censure of slower comrades, Spedal groups formed of comrades who have not progressed as fast as others. No-one held down or demoted.
iii. Course structured to encourage critical abilities which are developed / through the consideration of material

Grouping

Comrades are divided into four groups:

a. Beginners who have basic literacy problems. They are taught initially in the vernacular in two groups, Nguni and Sotho for the first 3 - 4 months, with the gradual introduction of English vocabulary and phrases.
b. Intermediate English only is used as the medium of instruction. Comrades can read and do some calculations but have problems with spelling, sentence contruction etc.
c. Pre-advanced group Comrades have competence in reading their mother tongue and in English but wish to devdlop

skills in writing reports and letters, recording minut[illegible]
reading critically on their own, mastering punctuation [illegible]

d. Advanced group Made up largely of comrades with spec[illegible] tasks eg as instructors, who wish to upgrade themselves. Many of these comrades have matric and some a partial university training. They are anxious to develop and extend their understanding.
The English programmes is geared to Form 2 - 3 level grammar, including comprehension and analysis of sentence. Comrades read and evaluate South African and world literature and poetry through group discussion, and write their own short stories and poetry.

Some physics is taught to enable comrades to understand the materialist outlook.

3. COURSE CONTENT

a. Prominence is given to politics and political material at all levels. The literature of the ANC forms a basic content core of the course.

b. The content is concerned with relating instruction to the comrades' realistic position, to demystifying science and to making comrades critically aware of the bias and racist implications in white accounts of history and current affairs.

i. Beginners' Group

Introduction to English:

- Material specially prepared for instruction since existing literacy material often degrading or racist
- Words already familiar through the environment intro[illegible]
- Situations in which comrades are actually in used for examples and vocabulary.

ii. Intermediate Group

- Charter used for vocabulary, sentence construction and grammar
- Sentences used relating to situation at home and in which comrades now find themselves, including political terminology that they need

- Paragraphs taken from ANC literature and simple composition developed from these.

- Situational exercises
  Comrades required to draw up short compositions with political content strongly related to their training

iii. Pre-advanced and advanced

This course is in the process of change and development. The purpose of language and the different forms and functions of communication are discussed, including the ways that people can be manipulated through language, presentation of news pictures emphasis, omissions etc.

Critical evaluation of forms of language and content is integral to the course.

Comrades are involved in creative writing and criticism of established authors and poets.

Other suggestions that emerged in the course of panel discussion

- daily logs at all levels for writing and reading practice
- whole-word approach instead of phonics initially; phonics only to be introduced later for help with spelling
- analysis ofparts of speech not as valuable as understanding sentence structure
- Institute of Adult Ed. in Dar be invited to contribute and help with course design.

TEACHING AIDS

eracy Charts drawn up by themselves (hampered by shortage of material)

Primers for intermediate group - developed themselves, cyclostyled and stap

ths Use of material objects to teach concepts

Maths related to natural environment

Human and non standard measures as well as standard measures regularly used in estimating (eg matchbox, hand s

ier suggestions made during panel discussion

- flashcards and sentence makers for beginners groups
- making own books as readers and for sharing in group
- making group books with political content - comrades contribute a page or two each (suitable at beginners' and intermediate stages)
- daily logs as combined reading/writing practice
- material written by more advanced comrades to be used for teaching less advanced.

EVALUATION, ASSESSMENT AND RECORD KEEPING

Continuous assessment

This is the basic method involving personal observation, daily classwork and homework done once or twice per week

. Promotional exams

Continuous assessment is supplemented by exams. In order to reduce the stress or even phobia felt by by many comrades with a background in Bantu Ed., papers are given out two weeks in advance and comrades are given ample opportunity to prepare their answwrs through discussion in their brigades. The general spirit of helpfulness and comradeship which is encouraged means that more advanced comrades will help the less advanced to prepare for their papers, as part of their revolutionary duty.

. Joint Evaluation by Student and Teacher

In addition to the preparatory work on question papers described above, the student comrades are involved in their own evaluation of progress. An aggregate is worked out in collaboration with their teachers.

. Evaluation of Political qualities

It is basic to the adult literacy programme that the struggle against illiteracy and ignorance is crucial to the whole revolutionary struggle of the movement. All comrades

whether involved in the literacy programme or not, are expected to help the less advanced as part of their revolutionary duty. Within the literacy programme, the following qualities are evaluated as purely academic ones.

morale of student
attendance
helpfulness to other comrades.

The best students in each brigade are commended at public ceremonies according to these criteria, as well as academic ones. Students prepare and read speeches on national days, showing in practical ways the progress they have made from lack of literacy to competence. The general effect is to inspire and encourage comrades to study harder.

Long term indications of success of the progamme

a. Complaints decreasing
b. Discipline improved
c. Reading habits developed
d. Wall newspapers better used
e. Contributions to journals and speeches increasing
f. Poetry writing increasing.

6. STAFF INDUCTION

The political base of literacy activities and their integration into the whole struggle for liberation means that staff recruitment is not difficult. This is undertaken by the commissariat using political motivation which is summed up by the slogan: 'Those who don't know should learn; those who know should teach '.

The mass political drive towards studying permeates to every part of the movement, andilliteracy is viewed as abhorrent and part of the struggle for freedom.
Teaching is considered 'an immediate battle'.

These realities mould comrades' keenness to help one another. Unit leaders show intererst in the progress of unit members involved in the literacy programme, and group leaders are appointed to help other comrades between classes.

The work done by peripheral and peer-teaching is crucial. However and above the healthy attitude of comrades to learning and to helping one another, the need for experts is still essential.

Recommendation on Staff Training

Upgrading of teachers and training of staff in up to date methods is essential and HQ is strongly recommended to investigate the question of staff development.

THE NURSERY AND PRIMARY SCHOOL

INTRODUCTION

The following paragraphs set out in brief form the underlying principl which, it was agreed, should govern the organization and philosophy of both nursery and primary sectors. Each sector will then be dealt with separately under the first five headings set out on in the general outline. The sixth section, on Staff Induction and Development, is considered in relation to both nursery and primary areas.

Underlying Principles for both Primary and Nursery Schools

1. The broad aims and objectives of the nursery and primary schools should be in accordance with the principles of ANC Education Policy as laid down at the 1st Council Meeting (1978) and subsequently reiterated:
   a. to provide as broad a range of learning experiences as possible
   b. to develop within each student attitudes of co-operation, self discipline and respect for all socially necessary labour, along with the appropriate critical faculties
   c. to promote the all round growth and development of the child.

2. There should be close liaison between nursery and primary schools, not only relating to children transferring from nursery into the primary sector, but also to ensure that the methods and content of the curricula in both sections is in harmony.

3. The methodology of the nursery and primary schools should be based on active participation and direct experience with due recognition of differential rates of child development and concept acquisition.

4. The content of the curriculum in both sectors should be covered largely through integrated studies across the curriculum, with the nursery school dealing with concepts and content at a less advanced level, but setting the foundations for later work in the primary school.

THE NURSERY SCHOOL

Preamble

a) The phibos ophy of the nursery school should take into account the basic curiosity and desire to learn of young children, which needs to be stimulated, channeled and developed.

b) It follows that the nursery aims to provide a stimulating environment and ample experiences through which children develop and learn.

c) The organization of the nursery must take into account that children develop at different rates and in different ways.

d) It should be the policy of the nursery to involve parents /guardians in children's learning from the earliest stages, recognizing that the expériences children have at home are inseparable from their learning and development.

1. OBJECTIVES

These can be grouped under three main headings though there is some overlap and the groupings are interdependent:

a) Social, political and emotional development

- learn to work and play in a group (co operative and social skills)
- recognize rea·onable limits and learn self discipline through developing inner controls
- establish work habits

b) Intellectual development

- develop independent thinking in meeting and solving problems and making choices
- provide foundations for concept development and acquisition at the appropriate leve l
- develop fluency and ease in communication and expressing ideas
- develop listening and pre reading skills

c) Physical development

- Fine motor skills - through plenty of experience and practice free as well as structure(see content of course)
- Large motor skills - through physical play with apparatus and in natural environment, structured and unstructured

2. Methodology

Introduction

1) It is part of the methodology of the primary school to provide a warm, caring, non threatening and stimulating environment in which children can develop and learn.

2) The work of the primary school is seriously constrained at present by the diversity of languages spoken by the pupils. English, though the medium of instruction, is the home language of only a very small minority . The question of language will be returned to later in this report

3) Despite the above point, group discussion and dialogue are crucial and basic to the method of the primary school, and integral to active participation by children in their own learning.

4) The methodology lays stress on group activities, collective work and collective decision making with teacher guidance and control lessening as children progress. Decision making by children is considered part of the learning process and an important feature of and responsibility for oneself and within the group education at SOMAFCO the way in which differs from Bantu Education, in preparing for responsible, independent-thinking, socially and politically oriented people.

5) Themes should be introduced in part through interest expressed by children, and in part through the teacher's judgement of the need to cover certain ground. Flexibility is important and the teacher needs to be aware of how different areas of the curriculum can be drawn from a theme and skills reinforced through a variety of approaches. A flowchart based on the introduction of a theme is included to give guidance on how thematic teaching can proceed.

6) Not all work will be done through the medium of themes. Numeracy and literacy in particular will need systematic teaching out opportunities to reinforce these skills, and show there relevance in real situations will need to be taken (see flowchart)

. develop pre reading, pre mathematical and pre science skills through free play and guided use of materials.

c. Physical development

. Provide a wide range and variety of activities involving large muscles
. alternate active and quiet games and keep a balance of structured and unstructured activities
. provide activities which do not demand quick accurate movements
. provide opportunities for practice of finer motor skills through drawing, cutting, pasting, jigsaws, bricks, lego and other toys.

d. Discipline

Discipline and engringement of rules should be regarded as learning situations and occasions for problem solving. Discipline should be largely through reasoning and explaining the social necessity for self control and conformity to rules. Children involved in an incident should be stopped immediately and asked to talk through the causes and results of the incident. There should be an established routine for dealing with problems, which the children should understand. Such strategies should include:

. eye contact and other non verbal signs indicating disapproval
. verbal warning that behaviour is out of order
. withdrawal from the group to a 'quiet corner' to go and calm down and think about things.

Corporal punishment in the nursery school is not recommended in the nursery school. Young children learn very quickly from the models they are offered and if they experience physical punishment they will be quick to transfer this mode of behaviour to their peers, only exacerbating the problems one is trying to deal with.

3. COURSE CONTENT

Development of basic concepts

maths
. ordering and sequencing
. grouping and classification (sets)

NURSERY

	• matching and mapping • conservation • capacity, area and volume, length • shape
pre reading	• left-right sequencing • matching • 'reading a picture' • shapes and discrimination of small shapes • listening to stories and telling stories • looking at books - understanding symbolisation
pre science	• playing with water, sand, clay • balancing using natural and man made objects • floating, sinking • mass, crude comparisons eg of measure and weight • observation
pre writing	• drawing with a variety of materials eg. chalk, crayon, pencil, felt tips, • painting and finger painting to develop hand eye coordination and fine motor skills
art and craft	• painting, drawing, pasting, collage, clay, plasticene, cutting
physical development	• movement to music • play on large apparatus (eg swings, ladders logs • play with smaller apparatus - balls, hoops • practice in general body coordination through jumping, hopping, etc etc.

It is worth noting in connection with the nursery school curriculum that performing the activity itself will be sufficient. For example, while ordering or matching might be the objective of mathematical work, or discrimination of small shapes part of pre reading activity, there is no pressure on nursery school children to actually start recording their mathematical findings, or to start actual reading or writing.

NURSERY

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4. TEACHING AIDS

a. Concrete objects commercially manufactured apparatus out also natural objects, eg stones, sand, water, clay, twigs; objects readily available on the site: matchboxes bottle tops, blocks (sanded, different sizes and shapes)

b. Rhymes, stories pictures: In addition to commercially produced material, the staff can produce their own collections perhaps enlisting the help of secondary school pupils in lettering and illustration

c. ~~The children and staff~~ People as resources themselves and their natural environment pupils, parents, post matrics etc. etc all of whom have something to offer

5. EVALUATION ASSESSMENT AND RECORD KEEPING

The general process of evaluation in the nursery is through informal observation and note taking. This is followed by discussion between the teachers in regular meetings on the progress of individual children. Teachers should also involve the parents/guardians to find out how children are behaving at home. Close liaison on an informal basis with parents/guardians is important in assessing a nursery child's development.

It was agreed in the Panel that this section would be developed with the aid of Cmrde Caroline who would provide examples of evaluation and assessment schedules which could be used for guidance. Such schedules should not be used for diagnostic purposes, but for guidance in indicating broad areas of development eg social skills
language development
motor skills
intellectual development

Cmrde Caroline also undertook to give advice on methods of record keeping with personal files for each child. [This was unfortunately not received by Cmrde Hilary for inclusion in this report]

6. STAFF INDUCTION AND DEVELOPMENT

This area is dealt with later in the report, in conjunction with the Primary School.

A Organization of work

It is important to provide children with a variety of situations in which they can learn. Variety ensures that children remain interested and stimulated and helps deal with problems of different learning styles between children's and learning potential.

There is no order of priority in the following list:

i) whole group learning: for songs, stories, giving instructions and information: where one wants to minimise individual differences and get a group response

ii) individualised work:- so that teacher can give personal attention and special help, allow child to progress at own pace, practice skills, work on own project or work card, work from text book

iii) small group work: on joint projects - where children can help each other, collaborate in developing deeper understanding, support each other's learning (especially through talk and questioning) foster co operative attitudes and practices, minimise competitiveness, economise on teacher attention/time by grouping children of similar ability /stage of concept development

iv) chalk/talk: for economy of teacher time to be used with great care so as not to overlook individual differences in children's understanding and ability and pace.

B Organisation of groups

The conventional Bantu Education grouping of children strictly according to age is not followed. Instead children are grouped broadly according to English language ability and manipulative skills. The groupings are also sufficiently flexible to allow for some personal choice . The groups that result tend to be of mixed ability and mixed age (i.e. non graded) The size and number of groups depends on staff availability, but the objective is to keep the numbers in a group quite small, with as many as nine groups operating. at one time.

There will also be some flexibility to allow for children's differing level and ability in different subjects though by and large the criteria already mentioned (English language, manipulative skills and choice) will determine how groups are constituted.

Organization of content

As stated above, the main method ofintroducing and covering materia is not through the ~~xxxxxxxxxx~~ division into 'subjects', allocated set periods in the timetable. Following accepted primary practice in many countries outside South Africa ~~xxxxx~~ a flexible approach is recommended using the links between areas to reinforce and extend children's understanding and knowledge, rather than emphasise divisions

It is of the utmost importance to ~~xxxx~~ teach language as learnt across the curriculum and take every opportunity to teach structures and encourage fluency in ~~xxxxxxx~~ every area of the curriculum ~~xx~~. For example, work in physical education would give opportunities to teach and practise ~~xxxxxxx~~ language relevant not only in that but in other areas (Spoken Language) as would art, science, singing, maths etc.

There is no set upper limit ~~xx~~ in language learning. In order to reach the necessary level for transition to secondary ~~xxxx~~ in all other areas, it is necessary to have sufficiently developed English language.

The four main areas of the curriculum are now dealt with individually to show how the broad methodology outlined above would be implemented. It is important to stress that these notes are in the form of guidelines which meed to be supplemented by staff discussion and in some cases, workshop training and in service courses (see Section 6 on Staff Induction and Development). It is impossible in the space available to provide a comprehensive set of instructions on the methodology of primary school teaching, which is a complex set of skills requiring professional training.

* * *

a) THE METHODOLOGY OF TEACHING READING

1. Children cannot be taught to read a language which they cannot understand. Learning to read is not a process of recognizing or decoding every word of text. Children learn to read through seeing it as a meaningful activity not by rote, or parroting phrases which do not approximate to their normal linguistic structures. 'Reading' in which children's intellect and positive attitudes are not engaged, leads to failure to make progress beyond rather basic levels.

It follows that learning to read has to be seen as part of the language development policy of the school, and that most progress will be made if opportunities to teach and reinforce children's ability to cope with text are taken across the curriculum

2. Pre Reading skills

There are a number of pre reading skills which have to be established before children can cope with text:

i) an understanding that symbols on paper represent speech sounds

ii) familiarity with the format and conventional layout of text and books (left to right sequencing, front to back, top to bottom etc.

To establish this understanding children need to have had plenty of experience with books, both with and without adult help, need to have had stories read to them and had the conventions above pointed out to them in appropriate ways. They need also to have had experience of telling stories <u>themselves</u> to pictures as well as having stories read to them - to develop positive attitudes to books.

iii) At a different level, children need to be able to discriminate between small shapes and orientation of letters, eg. p, b, d; u, n, m; y

They will learn this discrimination through practice with matching games, drawing (<u>not</u> necessarily writing) and playing with shapes (not necessarily letter shapes. The acquisition of such skills is not solely through practice in the exact subject area, but will be broadly bases (even physical ed. can be used to help children recognize letter shapes).

iv) Children need to be able to discriminate between sounds. They will need plenty of practice with rhymes, songs and games to establish similarities and differences.

3.a) Reading is <u>not</u> normally done by working out a word through its phonic structure. This is a technique used from time to time by quite fluent readers to cope with new words. Instead people acquire the ability to read through making sense of text using a variety of contextual clues including sensible guessing from the meaning of the text. Fluent readers 'fill in' words according to sense and do not read every word on a page. If a child makes a mistake which indicates that sense rather than the actual letters on the page have guided her, this should be acceptable, but gently corrected if the error continues.

3b) Children rely on many contextual clues in learning to read. It is important to provide a variety of methods to support the learning of different individuals. For instance, meaning in context, clues from pictures, shapes of letters, phonic cues, whole word recognition, associations serve different individuals at different times and at different stages.

4. It is important that learning to read happens in a non threatening, supportive atmosphere. The enclosed guide for the use of non professionals helping their children to read, developed as part of a research project in Britain may be helpful.

5a) It is highly recommended that in the early stages children learn to read and write simultaneously through the production of their own reading books, with the teacher's help. The method is for the teacher and child to decide on a simple phrase/sentence which the teacher writes out. The child traces over this or copies underneath, and draws her own picture to help her remember (for example, 'I am Thandi' with a self portrait).

This method of vocabulary introduction can be fairly carefully structured by the teacher working in groups. The teacher would need to keep a record of words introduced to different groups and grade them. One would aim to introduce and establish a core vocabulary graded according to difficulty and added to as children progress. Children should have access to a common 'bank' of words, but also have a personal 'bank'.

The guidelines to the use of 'Breakthrough' reading materials are recommended to amplify this brief account.

b) The following techniques are all useful in helping to build up a sight vocabulary and in reinforcing reading:

word matching games
reading labels and phrases round the room
games such as snakes and ladders, and variations
sound/initial letter matching and recognition
flashcard recognition
closure exercises
work cards
alphabet books made as class activity and individually
simple class books
songs and rhymes written out
labels for children's work and paintings

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6. When children have a core sight vocuabulary or 100 - 200 words and are reading their own home made reading books, and some simple texts graded primers can be introduced. Tnese should be selected with care attention to content since much material on the market is
   a) racist - overtly so, or simply omits to portray anything by white children
   b) biased towards middle class values and inappropriate for our schools
   c) written in an artificial style which despite apparent simplicity, makes children's ability to decode particularly difficult

7. Learning to read should be seen as an activity where children can help one another, and where non professionals who are literate can also be drawn in. Reading in pairs by children at similar levels, as well as children at different levels, can be helpful in gaining confidence and getting practice.
   Mistakes should be seen as indications of where children need help and clues for the teacher to develop strategies to deal with misunderstandings

8. The introduction of phonics is helpful when children are already reasonably well established and starting to write on their own as well as read.
   The use of personal alphabet books at this stage is recommended both as an aid to writing and to reading.

THE MATHS AND SCIENCE CURRICULUM IN THE PRIMARY SCHOOL

1. Introductory remarks

The teaching of mathematics and science in the primary school should be guided by one fundamental principle: that children's learning develops through a growing awareness about the objects and relationships in their own personal world. What the school can do is to support children in coming to understand their world, and provide opportunities for enhancement and extension of this experience.

A. MATHEMATICS

There are three aspects which have to be taken into account in the primary school:

- acquisition of concepts
- acquisition and practice of skills
- development of a body of knowledge

These three facets are interdependant and it is not educationally sound to try and promote the latter two at the expense of the former or without constantly assessing whether a child has an understanding of the concepts involved.

Concept acquisition cannot be directly taught, which places great demands on the professional skill of the teacher, who must be aware of the level of understanding of the child, and able to reinforce or move her on, by providing new experiences and practical activities.

The kinds of concepts one hopes the primary child will have acquired before transition to secondary school are:

- sets - leading to understanding of number and of relationships
- measure - including conservation
- operations - the commutative laws
- recognition and conceptualisation of problems.

Objectives of mathematics teaching

These overlap quite extensively with the objectives of science

and much mathematical work will arise or be practised in a scientific context (as well as in other curriculum areas).

Teaching and learning will be concerned with:

- underlying concepts and necessary vocabulary
- knowledge of facts
- performance of skills (mental, practical and written)
- ability to apply the foregoing to solution of problems
- ability to recognize and use pattern
- ability to deduce and predict and make sensible informe estimates
- making general statements
- problem solving strategies
- exploration of situations along mathematical lines
- understanding methods of proof

As children's experience of mathematics increases, one hopes that they will increasingly be able to draw analogies to solve new problems.

Content of the mathematics curriculum

Of several possible ways of dividing mathematical content at primary level, the following outline is suggested:

The model is valuable for several reasons.

i. it sets out clearly the <u>order</u> in which mathematics n
to be tackled by children, in order to be 'in synch' w
their conceptual development (eg. understanding one-o
correspondence is prior to addition and subtraction)

ii. it lays out clearly the next stages for chilren who ha
shown themselves ready to move forward

iii. it indicates parallel levels of work which can be und
taken by children at a certain developmental level (e
early work on fractions can be tackled by children w
coping satisfactorily with addition and subtraction)

iv. it indicates the areas which teachers may need to go
back over, reinforce or consolidate with children wh
having difficulties. i.e. it offers strategies for c

who are failing, and an alternative to the notion th
children may just need more practice at the same task.

Outlines for the four major strands

Sets

1 *The idea of a set and of a relation*
2 *Using sets to develop the idea of number*
3 *Operations between sets*
4 *Use of technical terms and symbols*

Measures

1 *Simple measures*
[length, weight, cost (money), time, capacity, area, volume, angle . . .]
2 *Statistics involving measures*
3 *Compound measures*
[speed, pressure, consumption, unit cost . . .]

Numbers

1 *Whole numbers*
2 *Operations with whole numbers*
3 *Patterns and properties of whole numbers*
4 *Fractional numbers*
5 *Statistics involving counts*

Geometry

1 *Geometry without measuring (topology)*
2 *Three-dimensional and two-dimensional shape*
3 *Movement in space:*
Linear movement (translation)
Turning (rotation)
4 *Other transformations:*
Reflection
Scaling up and down
5 *Combinations of transformations*

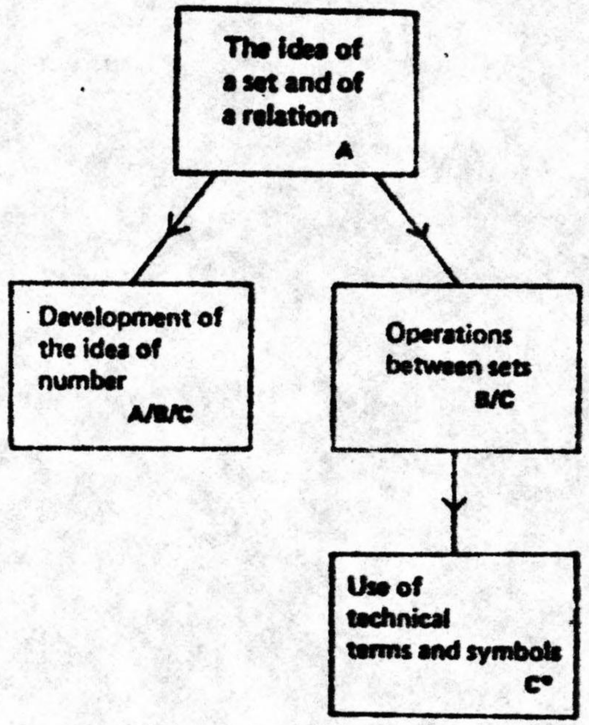
The rest of this paper gives a more detailed breakdown for each strand.

Sets

Sorting and relating are two of the ways in which very young children explore their world and come to understand it. These activities are also basic to the later development of mathematical ideas. For example sets, which are the collections made by sorting, are fundamental in the first understanding of what whole numbers are.

Section 1 (The idea of a set and of a relation) is 'pre-number' and the parts listed may develop in various orders. After this we can move naturally into section 2 on numbers and at the same time into section 3. The latter develops a different strand which is concerned with combining sets in various ways. It lays foundations for the development of logic and some other non-numerical mathematical topics beyond the primary school stage.

This chart shows the order of development diagrammatically and the detailed content appears in the lists which follow.



1 The idea of a set and of a relation

Experience and discussion of sorting leading to sameness and difference — A

Belonging and not belonging and diagrams to illustrate this — A

Sets with no members — A

Experience and discussion of everyday situations where one thing is related to another — A

Development of language and arrow diagrams to describe relations — A

2 Using sets to develop the idea of number

(See *Numbers:* sections 1, 2 and 3) — A/B/C

3 Operations between sets

Experiences and discussion of sorting by two properties leading to:

subsets — A

intersection of sets — B

union of sets — C*

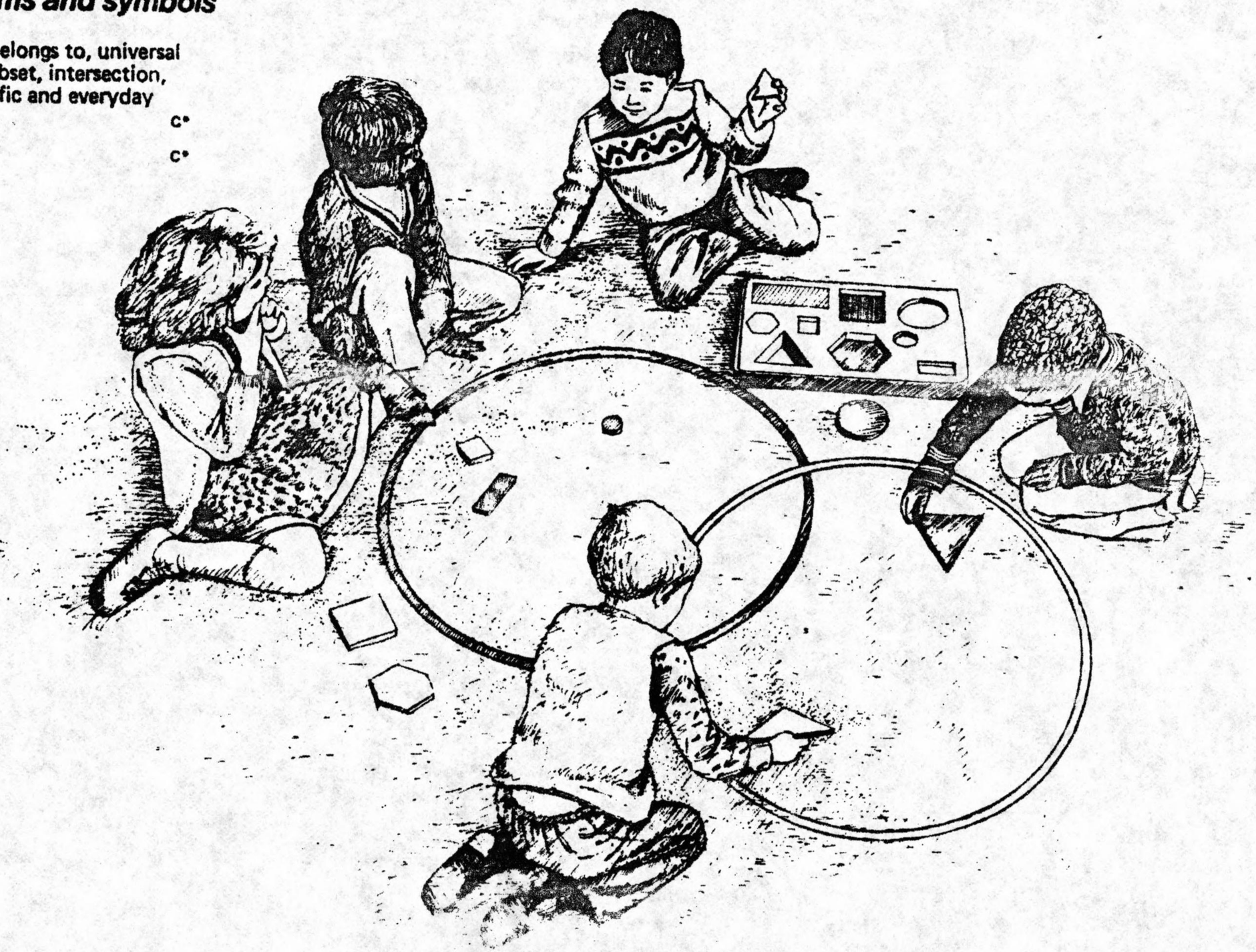
Diagrams (such as tree diagrams, Venn diagrams, Carroll diagrams) for these situations — B/C*

Situations and diagrams involving three or more sets — C

4 Use of technical terms and symbols

Application of terms (such as belongs to, universal set, empty set, complement, subset, intersection, union) in mathematical, scientific and everyday situations C•

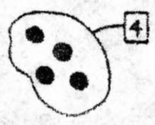
Symbols for these terms C•



Numbers

The meaning of numbers is first met pre-school through situations which concern the size of a set of objects, for example two cars outside the house, three candles on the cake. This leads to development of the numbers used for counting.

This set model is a good starting point for number but is limited because it cannot demonstrate the fractional numbers or, much later, the numbers less than zero. Hence we also develop the number-line model.



The set model



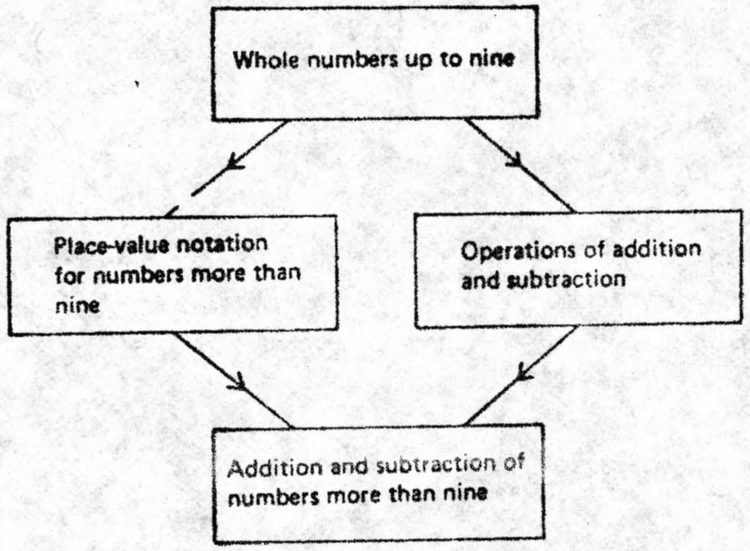
The number-line model

Initially children count the moves along and back. There is a place for the fractional numbers between the whole numbers and an extension beyond zero for the negative numbers.

The set model emphasises the size of a number. The number-line model emphasises the order of numbers. Both models need to be introduced at primary level so that children can learn to operate well in a variety of real situations.

Once a child understands the numbers up to nine it is logical to move on next to study the place-value notation which we use to write the numbers bigger than nine. It would be equally logical to move instead to the idea of addition and subtraction within single-digit numbers. However if you want to use environmental situations in school then it is an advantage to introduce the meaning of two-digit numbers through place-value as soon as possible. Yet another advantage of this order is [illegible] no new symbols are needed.

Eventually knowledge of both place-value notation and the meaning of addition and subtraction come together in combining two-digit numbers.



The idea and language of fractions come early in a child's everyday experience. These days decimal-fraction notation is the most used in real-life calculations. Decimal notation can precede vulgar-fraction notation which now has little necessary use outside the school and college curriculum.

The topics listed under section 3 (Patterns and properties of numbers) and section 5 (Statistics involving counts) develop gradually across all levels and hence appear in classrooms alongside sections 1, 2 and 4, which are more nearly linear in development.

Whole numbers

ne-to-one correspondence leading to comparison f sets (more than, less than, the same number s) A

rdering sets by this comparison A

umber names up to ten A

rdinal language (first, second, next, last . . .) A

ounting the number of members in a set A

ecognition of symbols (0,1,2,3,4,5,6,7,8,9) A

ace-value activities in a variety of bases A

umber names and symbols in base ten, empha- ing the value of digits in each position A/B

e number line to 100 A/B

rdinal numbers (tenth and beyond) A/B

unting on and back on the number line A/B

mping on and back in equal intervals (especially twos and tens) A/B

tension and use of number line to 1000 B

Operations with whole numbers

ddition and subtraction in combining, comparing d splitting sets, and on the number line B

ecording concrete addition and subtraction situa- ns, including ways developed by the pupils B

emorisation of all addition and subtraction bonds 10 + 10 B

ltiplication and division in combining and tting sets and on the number line C

rding concrete multiplication and division s, including ways developed by pupils C

Memorisation of all multiplication and division bonds to 10 x 10 C

Relations between operations (subtraction as the inverse of addition, multiplication as repeated addition . . .) C

Behaviour of operations (commutative, associative and distributive properties) C

Problems involving choice and application of calculations C

Development of techniques for computations involving:
addition and subtraction of three-digit numbers
multiplication of two two-digit numbers
division of a three-digit number by a single digit C

Checking and estimating in calculations C

Use of some home-made and commercial calculating aids (conversion graphs, electronic calculators . . .) C

Notation and calculations in some bases other than base ten C•

3 Patterns and properties of whole numbers

Odd and even numbers A/B

Patterns along the number line and in a number square A/B

Patterns on the 10 x 10 multiplication square C

Multiples, divisors, square numbers, prime numbers, triangle numbers . . . C

Study of large numbers C

4 Fractional numbers

Use of everyday fraction language (probably only half and quarter) in practical situations A/B

Development of language to three-quarters, one-tenth, two-thirds . . . B/C

Extension of place-value notation to tenths and the use of the decimal point C

Recording practical situations using one place of decimals C

Addition and subtraction with one place of decimals C

Extension to hundredths through the same steps C

Study of multiplication and division by 10 and 100 C

Use of symbols for vulgar fractions ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{10}$, $\frac{3}{4}$, $\frac{1}{100}$, $2\frac{1}{2}$ . . .) C

Meaning of percentage C

Simple mental addition and subtraction of vulgar fractions with the same denominator C

Ideas of ratio, proportion and scale C•

Idea of probability C•

5 Statistics involving counts

Statistics collected by counting things B/C

Organising such information and presenting it in a variety of ways B/C

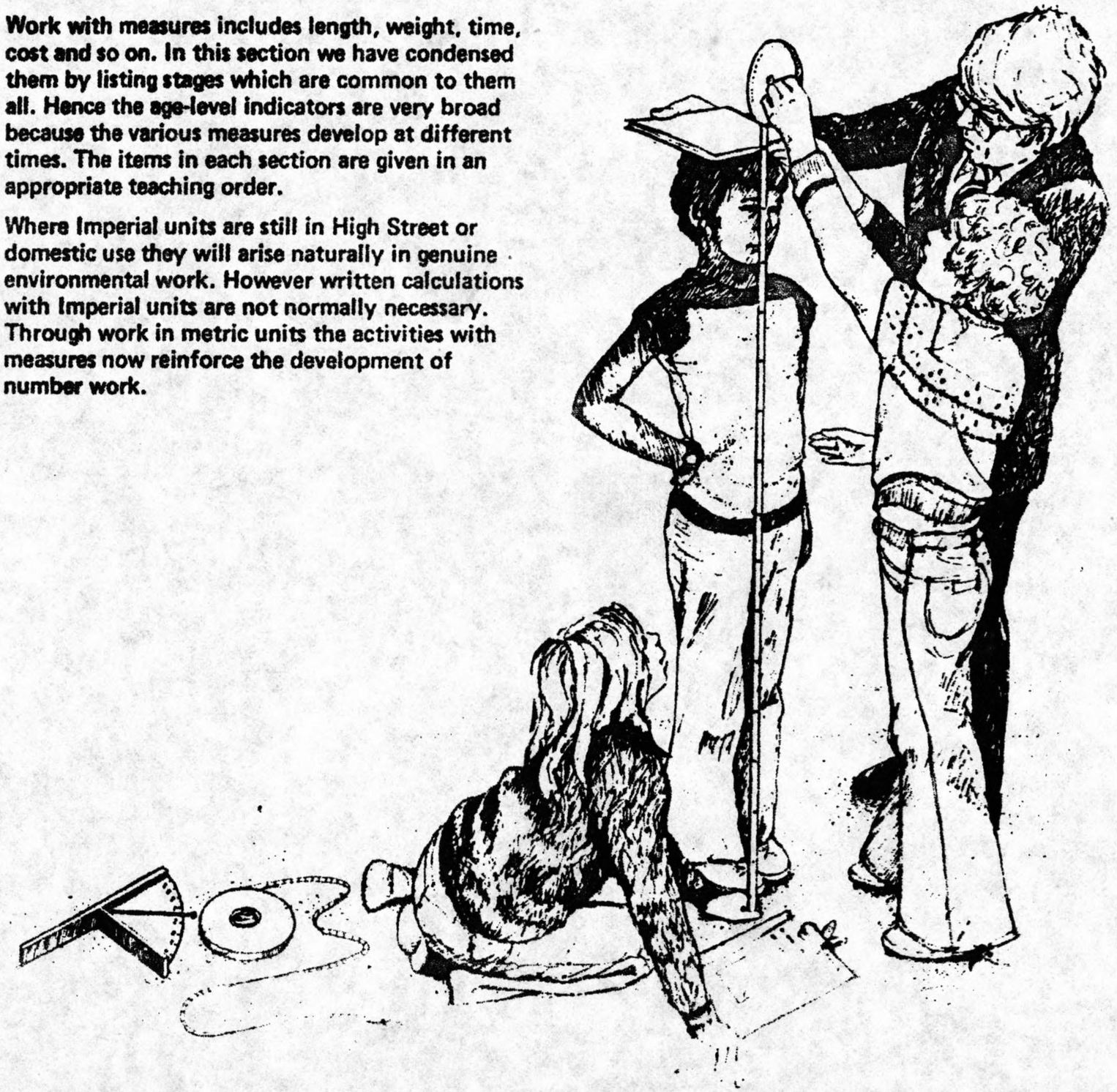
Making interpretations from the organised information B/C

Choosing a number to represent a set of numbers (the idea of averages) C

Measures

Work with measures includes length, weight, time, cost and so on. In this section we have condensed them by listing stages which are common to them all. Hence the age-level indicators are very broad because the various measures develop at different times. The items in each section are given in an appropriate teaching order.

Where Imperial units are still in High Street or domestic use they will arise naturally in genuine environmental work. However written calculations with Imperial units are not normally necessary. Through work in metric units the activities with measures now reinforce the development of number work.



1 Simple measures

[length, weight, cost (money), time, capacity, area, volume, angle . . .]

Experience with lines, solid objects, containers, surfaces, corners and turns, time intervals . . .	A·
Conservation	A/B
Comparison of two things	A/B
Ordering two or more things	A/B
Approximate measuring by counting home-made units, leading to the need for equal and then for standard units	A/B
Measuring with standard units, involving approximation, estimation, reading scales and dials, choice of units, recording	B/C
Practical situations involving arithmetical operations and using a calculating aid (table, graph, machine . . .) where appropriate	C
Memorisation of common units of measure and relationships between them	C
Historical aspects of units and measuring instruments	C
Calculations with measures	C
Relationship graphs involving measures (conversion graphs, distance/time graphs . . .)	C

2 Statistics involving measures

Statistics collected by measuring	B/C
Organising the information and presenting it in various ways	B/C
Making interpretations from the organised information	B/C
Choosing a measurement to represent a set of measurements (the idea of averages)	C•

3 Compound measures

[speed, pressure, consumption, unit cost . . .]

Experience of appropriate practical situations	c
Finding compound measurements by making appropriate simple measurements, as in section 1, and calculating	c
Easy calculations involving compound measures	c •



Geometry

Geometry at the primary school level is mainly about position, shape and movement. It has links with work on measures through length, area, volume and angle.

Children build up a lot of geometrical ideas before they come to school simply by moving themselves and other objects through space. They also acquire language related to these ideas. The activities in sections 1 and 2 should develop this knowledge.

Many suitable geometrical topics are already common in primary schools. The classification and ordering which we show here is intended to help to link them together in context. The way in which movement (or transformation) is classified in sections 3, 4 and 5 links up with the current style in secondary courses.

The age-range levels show that the development is branching, not linear. Children are likely to be involved in ideas across several sections at about the same time. Some children who are strong on number work may not prove to be so in spatial concepts, and vice versa. The teacher needs therefore to be careful of his or her expectations of individual children.

1 Geometry without measuring (topology)

Development of experiences and language involving ideas (such as inside, outside, on, through, between, next to, closed, connected, crossing . . .) which are used to describe relations between topological features (such as points, boundaries, regions, surfaces, holes, tunnels . . .) A/B

Using these ideas to explore sameness and difference in both two- and three-dimensional figures (such as London Underground maps, fly-over junctions, mazes, networks . . .) C

2 Three-dimensional and two-dimensional shape

Points and lines, straight and curved lines, flat and curved surfaces A

Exploration of 3D and 2D shapes in the environment A

Matching shapes in jigsaws, posting-boxes, nesting puzzles . . . A

Collecting, making and classifying sets of 3D and 2D shapes, including regular and irregular ones A/B

Naming shapes (such as cuboid, cube, cylinder, sphere, cone, pyramid, prism, torus, polygon, quadrilateral, square, rectangle, triangle, circle . . .) B/C

Dissecting and combining 3D shapes or 2D shapes B/C

Tessellations B/C

Making models of polyhedra C

Simple properties of some 3D and 2D shapes C

3 Movement in space

Linear movement (translation)

Experience of movement in a straight line A/B

Movement leading to ideas of horizontal, vertical and parallel B

Co-ordinates of a point regarded as movement from an origin C

Turning (rotation)

Environmental and personal experiences of turning A/B

Turns and parts of turns (quarter and half turns, right angles) B/C

Direction by angle; compass points C

Position by distance in a particular direction C

4 Other transformations

Reflection

Environmental experience of reflections A/B

Symmetry about a straight line or a plane B/C

Reflection in more than one mirror (kaleidoscope . . .) C

Scaling up and down

Environmental experience (scale models, enlargements of photographs . . .) B

Scale drawings, maps and plans C

5 Combinations of transformations

Pattern making, using a variety of transformations. C

Practical teaching consideration

1. Practical work is essential since logical thinking develops initially in relation to real objects that the children can actually manipulate.
2. Discussion is a most important adjunct to practical work. Some features of discussion and its value in class are summarised below.

Discussion as a teaching tool

a. Discussion obliges pupils to clarify their thoughts and present them in a form which can be communicated to others.

b. Through attentive listening to the way a pupil formulates her thoughts, questions and statements, the teacher can gauge the level of understanding, areas of possible misunderstanding where more explanation or practice is needed.

c. Questioning and discussion can improve pupils' observations, understanding and accuracy in use of terminology, as well as test recall.

d. The arguments and evidence of <u>peers</u>, as well as those of the teacher are valuable resources for each pupil's learning. Often the questions and explanations of people at a similar level of understanding and intellectual development may be more valuable in clarifying an issue than those of a person who has passed beyond that level.

e. The exploration and development of ideas that happens naturally in dialogue can be harnessed to pupils' scientific work. We strongly encouraged that the opportunitie for discussion be not just in large groups, conducted by the teacher, but in smaller groups or pairs of pupils working on their own. Discussion between pupils on the set task should become a regular, expected and reinforc: feature of their learning.

Content of the curriculum

The environment of the school and the interests and experience of the teachers and pupils will provide the richest resource.

The quantity of knowledge acquired is not the criterion for learning science in the primary school. Rather, the quality of experience, growing ability to work in scientific ways, and increasing accuracy, thoughtfulness and critical ability will indicate good practice and progress.

B. SCIENCE

Objectives of science teaching

The practice of science in the primary school is not unlike the work of older scientists, since it deals with observation, hypothesis making, testing and observation of results and revision of hypotheses on the basis of these observations. Broadly, the aim is for children to develop enquiring minds and a scientific approach to problems.

Teaching and learning will be concerned with:

- observing, exploring and ordering observations
- developing basic concepts and logical thought
- posing questions and devising experiments or investigations to answer them
- acquiring knowledge and learning skills
- communicating
- appreciating patterns and relationships
- interpreting findings critically

These objectives can be presented diagrammatically for easy reference:

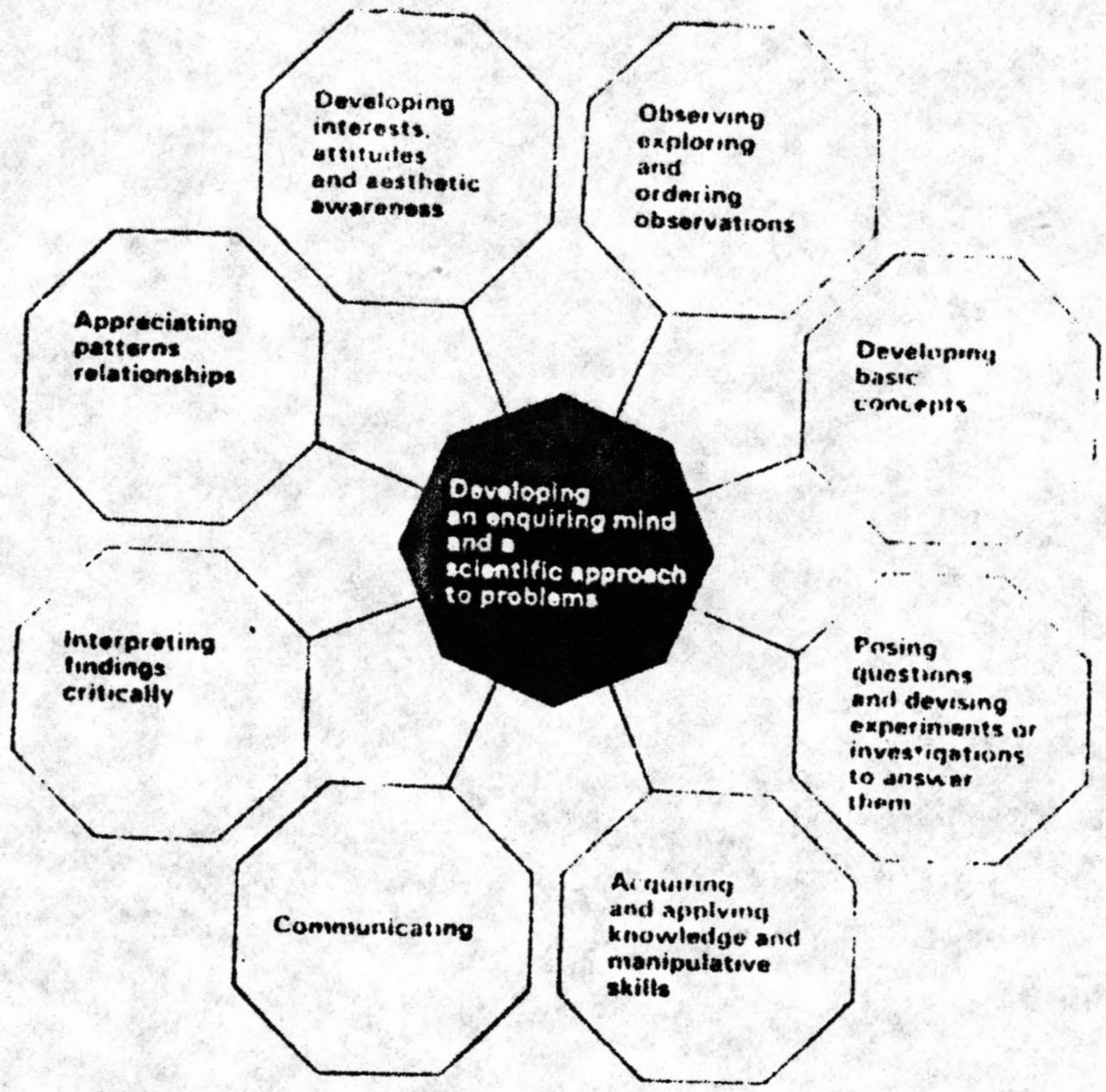


Figure 15 Schools Council Science 5–13 Project: Statement of objectives for children learning science: broad aims

SOCIAL STUDIES.

1. INTRODUCTION.

The reasons for teaching integrated studies rather than dividing work rigidly into subjects are given in the Preamble to the Primary documents. Social studies offers a way to integrate topic or project work. It can incorporate history, geography, environmental studies, the development of societies, some science etc. Thus it does not involve taking on new areas of work, but provides a framework and structure which enables teachers and children to build on previous work and experience and to develop deeper insights into the way we organise our world. It suggests the criteria upon which the selection and planning of topics can be based.

The main aims and objectives will be the acquisition of intellectual, social, political and some physical skills and the building of a body of socially useful knowledge. The stress is on developing concepts rather than merely acquiring information. Thus Social Studies is a most important area of work through which a child can achieve social, political and emotional development, as well as specific skills.

The main part of this document will set out suggested skills and concepts for a Social Studies programme. Also included are examples of flow graphs etc which set out how suggested topics could be studied.

2, LANGUAGE.

Language should be taught across the curriculum and Social Studies is a vital area of work for discussion, for understanding, developing and expressing ideas. Suggestions for tackling this with a multi-lingual group of children will be discussed in a separate paper.

OUT OF SCIENCE CURRICULUM.

PRIMARY SCHOOL

AREA AND LOCATION

Experiences basic orientation within the local and national environments. Perceives the earth as the home of man but shrinking in terms of time, distance and limits of resources. Observes how man uses and influences the environment. Learns the use to be made of local and world maps.

ATMOSPHERE AND COSMOS

Can describe and measure simple climatic factors in the local environment and appreciates their significance for food production. Recognises the role of the atmosphere in the life of the plants and animals. Can identify the major climatic and vegetative patterns of the world.

LANDFORMS, SOILS AND MINERALS

Knows that soil is dynamic: (a) it forms, (b) it contains living things and supports plant growth, (c) it erodes or becomes less fertile. Can identify different soil types. Sees the interaction between soil and living things. Understands that mineral resources are limited. Can point out on a map the general arrangement of landforms in Britain and the World.

PLANTS AND ANIMALS (BIOTA)

Knows from first-hand experience various kinds of plants and animals in their own environment. Recognises inter-dependence among soil, atmosphere, plants (producers) animals and man (consumers). Knows what is meant by the food chain. Is aware of some endangered species and measures for their conservation, particularly food species important to man.

WATER

Knows the necessity of water for life and its importance as a natural resource. Knows the water cycle. Is aware of water pollution.

PEOPLE

Recognises the varieties and similarities among people. Knows how people live in and use different environments. Knows of rural depopulation as a world-wide phenomenon. Is aware of population growth and its relation to the quality of life.

SOCIAL ORGANISATION

Learns individual and group responsibility concerning environment. Uses environmental experience to gain self-discipline. Recognises agencies working on environment problems and recognises international co-operation as a means of solving world environmental problems.

ECONOMICS

Relates food, clothing and shelter needs to available resources in various societies. Recognises the organisation of resources into farming, forestry, fishing, mining, manufacturing, servicing, transportation and communication.

AESTHETICS, ETHICS, LITERACY, NUMERACY

Uses environmental experience to acquire basic skills. Builds a basic vocabulary of environmental terms. Uses the visual arts and music to describe and interpret various environments. Develops an appreciation of art and design factors in the built environment.

BUILT ENVIRONMENT

Recognises different buildings and functional areas in the locality (residential, shopping, work places, leisure provision). Knows the main local services (police, fire brigade, hospital).

ENERGY

Recognises manifestations of energy in various forms, and the control of energy by man. Knows that energy arrives from the sun. Knows the origin of fossil fuels.

3. PLANNING AND RECORD KEEPING.

The teachers might consider planning a broad outline for a prog[illegible] covering the whole primary range. This should be done in consultati[illegible] with members of the secondary staff. A flow graph is included as an exam ple.(Appendix 1) From this it can be seen that a study based on [illegible] Mazimbu complex can cover a large area of history, geography, science, social and political studies, folrklore etc. It is obviously not suggested that all the areas of work set out in such a plan should b[illegible] covered by any one child or group. A suggested programme for each [illegible] group could be selected from the overall plan each year. Such a prog[illegible] could be based on particular themes or topics which the staff (and a[illegible] the children) choose. A simple matrix could show the theme and the underlying concepts which should be covered.(Appendix 2 as an example) Alternatively a programme could be based on concepts and suitable t[illegible] then chosen for them. (Appendix 3). The skills which are being deve[illegible] should always be noted.

Finally each specific topic can be planned and recorded in greater d[illegible] on a matrix, flow graph or in the form of notes. It is suggested th[illegible] notes, matrices, flow graphs etc which the staff prepare should be kep[illegible] as permanent records of work planned and covered.

The Preamble states that there should be flexibility. This is essential in Social Studies. The programme must respond to current events and t[illegible] the interests of both children and teachers, as they arise. This does not imply that the curriculum will be haphazard. The criteria for choosing a topic should be its suitability for helping the develop the concepts and skills selected by the staff.

The concepts included in these guidelines are <u>only suggestions</u>. The staff at SOMAFCO will make their own selections. They might consider the following criteria for such selection. The concepts should be:

relevant to the children
help to explain human behaviour and social experience and environm[illegible]
be able to be supported by evidence and a variety of resources
be applicable to a number of different subject disciplines.

<u>INDIVIDUAL RECORD KEEPING.</u>

We enclose an extract from a British publication which will hopefuliy [illegible] of help to the staff in determining how to keep records of individual children's progress. (Social Studies in the Primary School. ILEA Guidelines. Appendix 5.)

B. SKILLS

A. Intellectual

i. **Learning how to learn.** The ability to find information from a variety of sources in a variety of ways.

Newspapers, various publications

Learning what your resources are and how to use them eg Books - use of contents lists, index, headings; learning to skim for information, use of pictures captions, etc.

Charts, graphs, maps etc. eg tally chart in interviewing people; simple pie chart showing unequal distribution of land, jobs in S.Africa ; bar charts to record daily temperature, rainfall etc.

One's self and others as a resource

Looking, listening.

Visits and excursions. Places of interest. The Museum in Dar

ii. **Recording.** The ability to communicate findings through an appropriate medium.

The written and spoken word, eg

Notes, stories; interviews, reports (eg telling clearly what you have done, what you have found out) Recording on tape.

Drama, poetry, music , dance. (See physical skills)

Pictures, charts, graphs, plans, maps, setting out simple statistical information.

iii. **The ability to evaluate information.**

An awareness that there often is not just one "right" answer. Compare newspaper reports on the same event. Are all books accurate? Compare different children's reportage on the same event. Distinguishing between actual factual misinformation and difference in opion and interpretation.

An awareness of bias, of distortion of facts.

iv. **Self evaluation**

Self assessment.

An evaluation of ones own attitudes.

B. SOCIAL SKILLS.

i The ability to work alone; to participate within small and larger groups.

Learning to work alone when appropriate; in groups of different sizes, for example, sharing equipment, projects, group projects etc.

ii An awareness of groups within the community and the wider society and how individuals and groups relate to each other.

The child's family, friends, school, the Maxim complex, the ANC, Tanzanian Government etc.

iii. The ability to excercise empathy

the capacity to imagine what it might be like to be someone else.

C. PHYSICAL SKILLS.

i. The ability to manipulate equipment. Using this ability to find and record information.

Related to intellectual skills (i) - learning how to learn.

ii. The ability to explore the expressive powers of the human body to communicate deas and feelings.

Also related to skill(i) - dance, drama, music, poetry, etc.

D. SPECIFIC 'SUBJECT' SKILLS.

Geography - Graphic making plans, maps. Countour maps of small areas. Interpreting plans, maps. Use of compass.

Scale: Drawing to scale. Plans and maps. Drawings.

History: - Understanding that history is not a series of unrelated events. Cause and consequence. Development. Progress and retrogression.

Understanding sources of history

archaeology
painting (San Khoi) art
documents
oral history (very important in Africa)
books, documents.

CONCEPTS.

Concepts are general ideas which help children to sort out and understand the great variety of facts, ideas and events they encounter. For the teaching of social studies the teachers should select concepts which will help explain human activity and behaviour in relation to both physical and social environment. The following are suggested suitable concepts for the primary school.

Division of labour : is it always necessary? Why does it exist - efficiency; custom and tradition; the result of the distribution of power; (The position of Africans in S.A., the position of women.)

Distribution of power and authority Socialcontrol

Conflict — frmm individual conflicts to wars. Conflict with the physical environment. (droughts, floods)

Interdependence Cooperation and concensus — between individuals, groups, ... nations. , ecology - interdependence of living creatures.

Continuity change — traditions; development in agriculture, industry, changes in family life; social change through political , economic, technological reasons.

Values and beliefs

Similarity and difference

Causes and consequences.

It may at first seem that the skills and concepts suggested in this programme are well above the ability of most primary school children. However, if children are given the opportunity to question and explore to discuss and enquire in a caring atmosphere, they will develop intellectually, socially, politically and emotionally and acquire a body of socially useful knowledge and skills. The work must ofcourse be planned to suit the individual children and the groups. The London Committee will respond quickly to comments from the SOMA staff, to requests for suggestions and materials on specific areas of work etc.

IDENTIFICATION

INVERTEBRATES
MAMMALS
INSECTS
BIRDS

SIMPLE BOTANY

FLORA

FAUNA

MOUNTAINS, RIVERS

THE ENVIRONMENT

COMMUNICATION

TRAVEL

TRANSPORT

MOVEMENT

INTERDEPENDENCE

SIMPLE ECOLOGY,
MISUSE OF RESOURCES,
CONTROL OF RESOURCES

MAZIMBU COMPLEX

THE PEOPLE

TANZANIANS
S.A.
OTHERS

VILLAGES

TRADE

RIENT
SAL
ARM

FAMILIES

ACTIVITIES

THE SCHOOL

CONSTRUCTION

AGRICULTURE

THEIR HISTORY, CUSTOMS,
TRADITIONS,

TECHNIQUES,
EQUIPMENT,
ETC.

THE SERVICES

HEALTH,
ETC

TYPES, TECHNIQUES,
EQUIPMENT

NB. THE BOXES REFLECT POSSIBLE MAJOR THEMES.
EACH MAJOR THEME CAN BE SUBDIVIDED AS SHOWN ABOVE
THE THEMES ARE [illegible] SHOW POSSIBLE AREAS OF STUDY

SOCIAL STUDIES. PRIMARY SCHOOL

Suggestions for topics.	Some of the Main underlying concepts.
The family (nuclear, extended; child's own; other places, other societies)	Continuity & change; tradition; values & beliefs; division of labour; conflict & consensus; similarities and differences; social control.
Festivals (eg birth, initiation, marriage, death, anniversaries - political historical days.)	Tradition; continuity & change; similarities & differences; social control.
Mazimbu's people	Communication (how and why they came); division of labour; continuity & change; similarity & difference; interdepence; cause & consequence
History of the School	Cause and consequence; conflict and consensus; interdependende ; communication.
The villages	Change and continuity; tradions, beliefs; interdependence and divisions of labour; communication; social control.
Transport	Communication; change and continuity; division of labour and consensus, interdepende
Services	Division of labour, interdependence; communication; power and control; continuity and change.
Farming	Interdependence; cooperation; division of labour; conflict (with nature); continuity and change.
Water	See accompanying chart.
Baobab tree	Continuity and change (the seasons); interdependence (ecology); tradition and beliefs (folklore,)
Stories from A.N.C. history (including dhild's own memories, present life)	All main concepts could be covered.

A reminder that the basic skills suggested could be developed through any suitable topic: Learning how to learn - resources
Recording
Evaluating information
Self evaluation
Working alone and in varying groups
Manipulating equipment.
Social and political awareness.

Building a body of socially useful knowledge.

DEVELOPMENT OF SKILLS AND CONCEPTUAL UNDERSTANDING

COMMUNICATIONS

WE
how A get to school: WALKING
local transport
To 'CHARLOTTES'

inventions in communications

physical barriers to communication – RIVERS, MOUNTAINS, POOR ROADS

personal communication: language, signs, etc – WALKING

historical development of local transport

national network of transport and communications

mass communications: newspapers, television, radio, books etc

SOCIAL CONTROL

highway code and safety rules

friendship groups

families: parental control, including comparative historical and cultural studies

local and national government – ANC: SELF DISCIPLINE
S.A. GOVT.: CONTROL, RESISTANCE

school rules

rules of the playground.

rules of our society and what happens if we break them

differences between laws and rules

COOPERATION AND CONFLICT

In the family — with friends

working together in a local industry – VOCATIONAL WORKSHOPS, SHAMBAS

case study of cooperation in another group, [illegible]: COLLECTIVE FARMS

In the classroom

IN THE COMPLEX [illegible]

an historical case study, [illegible]
eg: BAGAMOYA

THE WATER CYCLE

EVAPORATION → CONDENSATION → RAIN

THE RIVER

WATER

AGRICULTURE

TYPE – FARMING, RAISING CATTLE, ETC

TECHNIQUES – FERTILIZERS, ROTATION, SEED

EQUIPMENT – TRACTORS, COMBINED HARVESTERS ETC

FOOD

PEOPLE

HOW WE USE THE RESOURCE

FLORA
|
SIMPLE BOTANY

HUMAN RESOURCE

FAUNA
|
BIRDS
|
INSECTS
|
MOSQUITO
|
DISEASE

INDUSTRY

WASHING

WATER SUPPLY

LEISURE
|
SWIMMING
|
FISHING

POSSIBLE DEVELOPMENT OF
A TOURIST [illegible]

ASSESSMENT

IN SOCIAL STUDIES.

PRIMARY SCHOOL.

Social studies, as has already been stated, is primarily concerned with the *process* of learning rather than the *product*. There are no set 'facts' that a teacher can expect a child to learn: consequently there cannot be a checklist for the acquisition of such facts, but there can be a checklist of skills and methods of learning because certain of these can be developed through the teaching of social studies. Social studies is a way of learning which involves first-hand experiences, discussion, enquiry, interpretation and communication of that enquiry. Above all, it involves the encouragement of attitudes in children which promote this way of working.

It is important that any assessment takes into account the learning environment, the opportunities which are provided, the attitudes and expertise of the teacher, and the range of resources which are available. Any assessment of the child involves also self-evaluation by the teacher. For example:

- Is an enquiry-based approach being adopted?
- Is an atmosphere which encourages questions from children being created? Are children encouraged to raise questions?
- Is the teacher seen as a resource for learning rather than the be-all and end-all of the process?
- Do the children have a wide variety of research resources available in the classroom and are they being taught to use them effectively?
- Is the classroom organisation conducive to small group work?

It is also necessary to remember the individuality of each child so that even when a class is working in groups, each child can be developing different skills and ideas. It cannot be emphasised too strongly that skills all take considerable time and practice to acquire and develop.

To a large extent, assessment of children's acquisition of skills and methods of learning will depend very much on the teacher's observations. In this belief, an attempt has been made to list some of the observations which teachers can make to help them assess their children's acquisition of the skills already outlined (though this is not a final list by any means). Having developed such a list of observations it would then be possible to keep records of children's development.

SKILL The ability to participate in small groups

OBSERVATIONS

- Enjoys working in this way
- Expresses a desire to continue working in this way
- Organises herself/himself within the group so as to share roles and tasks among the members
- Is prepared to listen as well as to talk within the group
- Often contributes to the group discussion
- Copes with the rejection of her/his ideas by other members
- Helps other members of the group
- Performs group tasks well

SKILL The ability to extract information from a wide variety of sources

OBSERVATIONS

- Uses a contents page and index when necessary
- Is aware that there is probably more than one source of information and will look for alternatives
- Looks for and uses different kinds of source material
- Is aware that different sources of material may provide different solutions to the problem being researched and can cope with that
- Can find the many sources available inside school
- Knows where to find appropriate sources outside school
- Realises that her/his own experience is a valid source of information

5 YEARS OLD

BASED ON THEMES

11 YEARS OLD

FAMILIES

my family: who is in it

my family: working together

my family: helping each other

comparing our families

SOME S.A. HISTORY

families in the past — some case studies

EXTENDED FAMILY

NUCLEAR FAMILY

AT MAZIMBU

families [illegible] — comparisons across cultures

families in other countries — some case studies

LOCAL COMMUNITY

where I live: my home

people who live around us

THE VILLAGERS

our homes: the buildings and their location

our school and our street

memory maps

the traffic on our streets

the population of our area

people moving to our area and people leaving it

local shops

VILLAGES

MOROGORO

development, planning and conservation in our area

our area in the past — use of [illegible] ORAL HISTORY

local communications

WORK

my [illegible] GROUP and my teachers

our school and our teachers

the jobs done by our parents and relatives

how our school works

people who work for us outside school

people who work for us in school

jobs in our area

how jobs in our local area change

CONSTRUCTION

SHAMBAS

VILLAGES

national industry — a case study

trade between countries

wider issues: unemployment, industrial relations, automation etc.

IN SOUTH AFRICA

local industry, A MARKET, WORKSHOPS

how a factory works - CONSTRUCTION

A FUTURE S.A.

5. ASSESSMENT EVALUATION AND RECORD KEEPING

As in the nursery school, informal observation is also a continual in the primary school with regular discussion at staff meetings about individual children's progressand development. Liaison with parents/ guardians is also important in assessing primary children's progress.

In addition, the following methods of assessment are used:

a) Marking of work books and home work by teacher responsible for groups and reviewed once a week

b) overall assessment of progress by head of school (co-ordinator) in light of set objectives

c) self assessment by pupil in conjunction with teacher to arrive at common decision about goals and achievement over a set period

d) group assessment by pupils and teacher - discussion in groups before end of term report made out

RECOMMENDATION BY PANEL

Cmrde Caroline offered to let the school have schedules for observation and assessment of social, physical and emotional development which could provide helpful checklists for these areas. It was stressed in the panel that these schedules should **not** be used to categorise or label children but merely for the guidance of staff.

B ASSESSMENT OF PROGRESS IN READING AND LANGUAGE DEVELOPMENT

The primary school is currently using self developed lists based partly on the Dolch lists of basic words, to assess progress in reading. There are difficulties in using schemes standardised elsewhere since they tend to give a distorted view, because of their cultural bias. However, the panel felt that the school needed more adequate ways to assess reading and language and the London panel has offered to look into alternative and supplementary schemes.

SKILL The ability to use conjunctions and generalisations to organise this information

OBSERVATIONS
- Asks questions or makes statements about conceptual groups, eg *We've been talking about how jobs are shared out in families today* or *Is that family part of the tribe?*
- Tries to make conceptual groupings of her/his own, eg *All those people are wage earners*
- Often makes generalisations about what she/he is studying, eg *All groups have rules so the people in them know what to do*
- Where a child uses the actual conceptual term, she/he does so in the right context, eg *A teacher tells us what to do because she has more power than us*

SKILL **The organisation of information into hypotheses**

OBSERVATIONS
- Often develops a hypothesis from the materials used when studying a particular topic
- Realises that this is only a hypothesis and will need testing
- Can test the hypothesis
- Can re-think the hypothesis in the light of new evidence

SKILL The willingness to explore personal attitudes, values and opinions and relate these to other people's

OBSERVATIONS
- Is open-minded, listens to other points of view, and will accept other people's ideas
- Expresses her/his own opinions and relates her/his own experiences freely
- Acknowledges that people's opinions and attitudes have a validity in the learning situation
- Is willing to tolerate standards and values other than those of her/his own society or group

A useful publication from the Schools Council 8-13 Project is *Evaluation, assessment and record keeping in history, geography and social science.*

b. Staff induction and development

Staff induction and development was considered under four road heads to deal with the special circumstances of the school.

1. Regular meetings between staff (including post matriculants in the education of the children)
   a) as well as the 'business'meetings concerned with day to day running of the school regular meetings are needed to discuss methodology and developmental issues. These could be planned round the use of apparatus new to the school, articles or books sent from elsewhere, guidelines produced by manufacturers or publishers of reading schemes & resources. These could take the form of workshops organized by the staff themselves, to keep abreast of current developments.

   b) Weekly meetings to plan and co ordinate the work of the school across the curriculum and across the groups. This would give opportunities for staff to learn from each others strengths in exploring across the curriculum approaches to themes introduced throughout the school and to make sure the work of the children was progressing in a reasonbly co ordinated manner across groups.

2. In Service Short Courses - these would be organized in holiday periods and probably run with the help of people funded to come to Somafco for this purpose. Possible people/resources were specialists from the socialist countries, ZAPU, SWAPO and FRELIMO as well as from the overseas missions of the ANC itself.

3. Distance Teaching for staff to upgrade themselves professionally in a systematic and formal way. Existing texts and courses (eg the OU courses in Language Development, Reading and Early Childhood) could be adapted. Staff undertaking such courses would write essays and do practical assignments in the school itself, and receive written or tape recorded comments and assessments from people agreeing to act as supervisors.

4. Courses away from the school. The fourth alternative is for people selected as suitable, and personally interested in becoming trained teachers at the school, being sent away to train. Such people would need to contract to return to the school to work there.

The work panel agreed that the following areas needed to be considered by staff as part of their development, whether in meetings organized among themselves, or as part of in service courses:

i) the hidden curriculum: a) teacher expectations, organization, discipline etc

ii) b) social and political orientation: how organization of group work, disciplining, authority structure influences the children's perception of social and political issues

Fluency in the graded readers gives an indication of progress. A[illegible] non availablity of suitable readers is ~~a~~ basic drawback. At pr[illegible] a New Zealand scheme is being used, but this is not considered adeq[illegible] nor particularly suitable.

Graphs of progress are kept by the children themselves.

3. Maths

Progress through worksheets and the textbook (Longmans and now Fletch[illegible] is the main ~~[illegible]~~ method of assessment.

The children are given 'quizzes' from time to time in informal set[illegible] They also do exams after plenty of preparation to help them get ov[illegible] phobias and prepare them for secondary schooling.

Record Keeping

Reports are made every half year and discussed with the childr[illegible] A copy is kept by the school and a copy given to the parent/guar[illegible]

Recommendation: i) A file be kept for each child. London panel and [illegible] Caroline offered to look into suitable methods of record keeping fo[illegible] our purposes.

ii) the use of diagnostic tests to help teachers ass[illegible] progress and difficulties of children : ~~Carole Caroline offered to give advice and help~~. It was emphasised th[illegible]t many of these tests ma[illegible] only be used by professionals for diagnostic purposes and that the[illegible] be regarded as for guidance on categories for assessment and not use[illegible] to classify children .

FURTHER RECOMMENDATIONS MADE BY THE PANEL

In addition to the matters dealt with in detail in this report the panel discussed at some length two further issues considered of great importance to the philosophy and practice of the primary (and indeed the whole) school complex. These were the issues of discipline and the medium of instruction and they are reported on below.

DISCIPLINE

It was agreed that discipline throughout the nursery and primary school should be regarded as the occasions for learning rather than mere punishment. Corporal punishment should not be administered since this does not help children towards understanding the social and political underpinnings of rules, but bases conformity on fear of retribution.

Instead, any child who enfringes conventional boundaries of behaviour, plus any other children involved, should be stopped immediately, and the children expected to give as coherent an account as posible of what happened. The socially necessary nature of the required behaviour should be emphasised, and where appropriate, political implications of co operation in groups pointed out. Children can be helped to recognize that rules and limits exist for everyone's benefit, and are not just arbitrarily imposed.

Children who misbehave should be removed from the activity/children they were disrupting, and made to sit in a quiet place to calm down and think it over. This kind of punishment should be sufficient for most circumstances and encourages children to see the rational social and political nature of discipline, rather than regard it as punitive.

Children who have themselves experienced harsh punitive discipline are unfortunately very ready to model their own responses to their peers on similar lines.

A way of evaluating the success of this new form of discipline would be to monitor not only how far children were learning to conform to acceptable patterns of behaviour, but also how far they were starting to take on this way of dealing with each other without the teacher's actual intervention.

ii) the role of other children in lear ing:

social/attitudinal and features of group learning

intellectual support from peers - collaboration

role of language

iii) the role of the teacher :

different models of what a teacher does - exploration

the implications of teacher as transmitter of knowle

facilitator

chairperson etc.

iv) special problems of children in exile and living away from

family set up

v) child development issues - an eclectic approach to current t
and issues

vi) the role of language in learning

vii) TEACHING METHODSAND AIDS

workshops on different ap roaches and methods based on differen
of the curriculum, apparatus and modern methodology/research

viii) Organization and record keeping

ix) Observation techniques and their rationale

use by teachers

x) Role playing for teachers to explore how they feel using dif
methods and how children themselves might be experiencing sit

THE MEDIUM OF INSTRUCTION

It was argued by some members of the panel that the issue of the medium of instruction in the nursery and primary school be reviewed. It was emphasised that young children who do not speak English at home are disadvantaged in school, as they experience formidable problems in mastering and understanding concepts introduced in English. At the same time, they are still in the process of achieving mastery of their first language.

Reference was made to current research in the UK and USA which shows that children not only learn quicker when taught in their home language, but that running the home language in parallel with the second language (in this case English) does not interfere with acquisition and practice, but actually facilitates it. There are also a number of arguments to do with the children's feelings of anxiety and alienation from a school environment which neglects the language and culture of their homes.

The members of the panel who were in favour of home languages being introduced in the primary and nursery school, suggested that the model offered by the adult literacy scheme in use in the West be seriously considered. This would involve examining various strategies for teaching English as a second language for those children who did not speak English 'at home', and moving over into English as the main medium of instruction when a reasonable facility to cope with the concepts and information had been attained.

Other members of the panel were not in favour of introducing 'home' languages into the school. They pointed out that the temporary difficulties experienced by children without a mastery of English were soon overcome as daily instruction in English led to greater comprehension. It was felt that the majority of our educated people come from 'non-English speaking' homes and that this had not hampered their academic and intellectual development.

All members of the panel were in agreement that the question of the medium of instruction cannot be resolved on educational grounds alone. There are political implications and it was recommended that the leadership of the ANC be asked to consider this as a policy matter, as well as consulting educational experts in the