TEACHING PRIMARY CHILDREN

TO DIRECT THEIR OWN LEARNING

by

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TEACHING PRIMARY CHILDREN TO DIRECT THEIR OWN LEARNING

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ABSTRACT

TEACHING PRIMARY CHILDREN

TO DIRECT THEIR OWN LEARNING

The purpose of this study was to develop a set of
materials that would enable primary students to complete
in three weeks a self-directed learning project on their
own. The set of materials consisted of two parts: a
student manual in which were presented the processes and
skills necessary for completing a self-directed learning
project; and a Teacher's Guide which provided readiness
activities designed to help students become more self-
directed.

Fifty primary students ranging from grades two to
four participated in the study. Students were asked to
complete a program manual which required them to select
a topic, set a goal, choose a product, select appropriate
resources, plan learning activities, set a time line and
share and evaluate their own projects. Guidance and
support was given through teacher-student conferences.

The goal of the research design was to perfect the
materials and check their transferability and to allow
for in-process changes to the materials through observa-

tion of the children using them. Daily observations were made to determine the degree of self-directedness exhibited by each student. Attitude and performance (capacity for self-directedness) were measured by means of pre and post-tests. These scores were then subjected to a Matched Group t-Test to determine significant differences. A final task or mini-project indicated the degree of transferability from the materials to other learning situations.

Findings from the study indicated that students who experienced the self-directed learning materials more successfully completed a task which required a self-directed response than students who had not experienced the materials. The most significant improvement was evidenced in student changes of attitude towards self-directed learning and perception of themselves as being self-directed. The results generally seemed to suggest that primary students given the necessary tools and guidance are capable of directing their own learning.

To Anne

ACKNOWLEDGEMENTS

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Chapter 1

INTRODUCTION

CONTEXT OF THE PROBLEM

Imagine a society where learning occurs entirely outside an educational institution without the direction of a teacher, outside the structure of a classroom or the constructions of grades and examinations. Such an idealistic view, of course, does not reflect the educational reality in our own society. However, we know that learning can and often does take place in the absence of and without direct intervention of a teacher; nor does learning always occur within an institutional setting. In fact, children spend far more time out of school than in school and are often more proficient than their teachers in such areas, for example, as computer programming.

Learning which occurs outside the classroom is usually both informal and self-directed and is very different from formal education. The person who directs his own learning is generally confident, resourceful, able to solve problems and operate autonomously in a complex environment. Schools, on the other hand, generally foster passivity, dependence and conformity.

It is this discrepancy between the image of the competent student and the type of student commonly seen in our present school system that requires a new approach to education which will develop the inner resources of individuals in preparation for a lifetime of self-directed learning and growth.

There is increasing support for the notion that it is the responsibility of the school to prepare children for lifelong, self-directed learning. According to Gardner 'Inner resources must be developed to the point where the individual can and will want to learn on his own'. Gardner (1964, p. 31). Gibbons points out that school doesn't prepare students for future learning. He recommends that students, while in school, be provided with opportunities to direct their own learning and implement their own programs. This he feels is entirely consistent with the demands of growth and the ideal conditions of learning. Furthermore, he feels, it prepares students for the personal decision-making and self-directed learning demanded of them after they leave school. Gibbons & Phillips (1980, p. 26). Knowles also supports the view that as a result of schooling students should have the skills to

go on acquiring new knowledge easily and skillfully the rest of their lives. Knowles (1975, pp. 15, 16). Rogers in calling for process oriented, self-directed educational practices goes so far as to say that man cannot consider himself educated until he has learned how to learn. He claims that the only educational aim that makes any sense for modern education is the reliance on process rather than knowledge. Rogers (1969, p. 21).

The problem then, according to the preceding writers, is that the school does not teach children those skills which will enable them to direct their own learning while at school and for the future. The school succeeds instead in directing their learning for them. Although some progress has been made at the high school and university levels, there is little evidence that programs have been specifically written to foster self-directed learning in the elementary school. This lack of self-directed learning programs, specifically in the elementary school, has prompted this study.

This thesis, therefore, attempts to explore the possibilities of self-direction by primary children through a set of materials specifically designed to

teach the process skills necessary for self-directed learning.

PURPOSE OF THE STUDY

The purpose of the study was to develop a set of materials that would enable primary students to complete in three weeks a self-directed learning project on their own.

Definitions for the terms in this statement are as follows:

1. set of materials - students guided through a set of process skills: choosing a topic, setting a goal, finding and using multiple resources, selecting a product, planning the project in terms of project activities and materials needed, managing time, and sharing the project. Also provided is a set of teaching procedures and responsibilities for the teacher to be followed when guiding the children through the self-directed learning project.

2. primary students - children in grades 2, 3 and 4 and generally ranging in age from 7 to 9 years.

3. complete - experiencing all the activities in the materials and ultimately demonstrating completion of the project by producing a concrete product.

4. three weeks - the entire duration of the experience with the materials including pre test and post test as well as a final evaluation task. Forty minutes per day 4 days per week for three weeks is to be spent on the project.

5. self-directed - one who is able to set his/her own goals, develop plans related to the goal, solve problems as they arise, evaluate his/her own achievement and make a commitment.

6. learning project - an undertaking the goal of which is to achieve an end which produces a learning experience as well as a finished product.

7. on their own -
   a) role of the teacher is to answer questions where children have difficulty with vocabulary, to guide the child through problem areas by using questioning techniques which will enable the child to solve his

own problem, engage in informal confer-

encing initiated by the student·to help

clarify the student's goal, and to make

available a variety of resources.

b) role of the child is that of an independ-

ent worker. He may ask for help and

assistance from the teacher, parent or

another child if he encounters a problem

he cannot surmount or if he needs assist-

ance in a task with which he has diffi-

culty. e.g. he may ask the teacher to

assist using the card catalogue or find-

ing a book.

The hypothesis for this study was that students

who experienced the self-directed learning materials

would more successfully complete a task which required

a self-directed response than students who had not

experienced the materials.

Goal of the research design was to perfect the

materials and check their transferability by means of

formative evaluation which would allow for in-process

changes to the materials through observation of the

children using them. Summative evaluation was obtained

by means of pre and post tests for attitude and performance (capacity for self-directedness). A final task or mini project indicated the degree of transferability from the materials to other learning situations.

The sample for the study consisted of forty students from Seymour Heights Elementary School in North Vancouver. One group of 10 students from Braemar School in North Vancouver also used the materials in accordance with the experimental design decided upon.

THE PROCEDURE

The initial stage of the project was to identify documents, experts and other authoritative sources relevant to the problem. A definition of self-directed learning was formulated to guide future selection of materials relevant to the concept of self-directed learning for the primary child. A working definition based on various current sources explained self-directed learning as a lifelong, volitional and holistic process where learning is a self-initiated, self-planned and self-evaluated experience. Furthermore, it was described as learning which occurs with or without a teacher, as well as within or without the traditional

educational institutional setting.   Gibbons & Phillips (1980), Huget (1982), Knowles (1975), Rogers (1969).

It was found that although a unified body of literature on the topic of self-directed learning does not exist, much of the writing from historical, psychological or educational perspectives lends support to the notion that children can teach themselves.   Such promising sources of literature as well as numerous documented empirical studies gave credence to the idea that self-directed learning programs could effect both cognitive and affective gains in the learner.

The literature was also perused to determine the essential components and their implications for designing a self-directed learning program.   Consideration was given to content, role of the teacher, role of the student and the type of classroom climate which would be conducive to learning such a concept.

Finally a search was made for information on self-directed learning relevant to the primary school child. The findings were very meagre.   It was, therefore, considered necessary to extrapolate those process skills used successfully in programs for older students and transpose them into meaningful language and experiences

for younger children. A Teacher's Guide was also de-
veloped so that replication of the experiment would be
possible.

The sample for the actual experiment consisted of
6 randomly selected groups of children ranging in age
from 7 to 9 years from Seymour Heights and Braemar
Schools in North Vancouver. A more detailed descrip-
tion is given in Chapter 4. The time framework for
each group was three weeks. Within that time each stu-
dent completed a self-directed learning project while
working through the materials specifically designed for
that purpose. A field development research design was
used in order to allow for intervention so that ongoing
improvements could be made to the working model. A
daily diary was kept to facilitate writing a narrative
case study describing the program in action.

Suitable instruments to measure attitude, compe-
tency and transferability were developed specifically
for the project. Pre and post tests were given to
determine the extent to which success in self-direction
was achieved. Check lists were used to monitor per-
formance, to record behavior and also to specify diffi-
culties children had with the materials. A recorded
interview was obtained from each student at the end of

the project. A mini challenge was then administered to determine the degree of transferability attained through use of the materials. Results were statistically tested for significant differences on the pre and post scores. Check lists were analysed at the end of the program to determine how well students had directed their own learning.

The descriptive research design lent itself well to this kind of study although it did pose certain limitations. However, the successful completion of many varied self-directed learning projects and the positive interview data received from the students attests to the fact primary students can direct their own learning and that such a program can be successfully implemented in the regular school classroom. However, this probe serves simply as a beginning and further investigation into the area of self-directed learning for primary children is urgently needed.

LIMITATIONS OF THE STUDY

Certain limitations must be considered when assessing the outcomes of this developmental study.

* It was only partially conducted under experimental

conditions; control groups were used only in the final task phase of the program when two groups totalling eighteen students were used for control purposes.

* Forty out of the fifty students participating in the experiment were from the same school and were taught by the author. Only one group in one other school was involved in the study.

* Because the children were not regularly scheduled to the author's classroom and were only available for the duration of the study, they were given only three days of instruction in order to learn the skills suggested in the program guide. In the regular classroom a teacher would give an indeterminate length of time to teaching the skills. Program work would begin only when the teacher felt the students were adequately prepared.

* Selection of students for the study presented a problem in that the author taught the enrichment program at the school and was assigned groups of varying ages and abilities. Selection of the groups, therefore, was a random procedure. However, the student sample could not be random-

ly selected as the groups were already determined by the classroom teachers. Groups coming for instruction ranged from very high to very low in ability level. The groups involved in the study were taken in the order they were scheduled without reference to the students' ability level.

* As no suitable instruments were available, those used for the study were constructed by the author. Although professional consultation was obtained, questions concerning the instruments' validity might arise.

OUTLINE

1. What is self-directed learning?

   (a) underlying assumptions

       i) learning takes place inside the learner

       ii) all can become self-directed learners

   (b) definition

       i) self-directed learning is a lifelong learning process

       ii) self-directed learning is volitional learning

       iii) self-directed learning is holistic learning

2. What components comprise a successful self-directed learning program?

   (a) selection of content

   (b) the teacher as a facilitator of learning

   (c) need for a supportive climate

3. What student characteristics and attitudes are evident in a successful self-directed learner?

   (a) positive view of self

   (b) pursues potentialities

   (c) creative in attitude

(d) responsive and responsible in relationships with others

(e) takes major responsibility for the purposes and methods of learning

4. (a) Why teach for self-directed learning?

    i) for life-long learning

    ii) in order to become mature, responsible person

    iii) to develop responsibility for own learning

(b) What research is there to support its inclusion in the regular school program?

    i) early supporters: Dewey Piaget

    ii) humanistic psychologists

    iii) specific educational practices which contribute to self-directed learning:

- teacher-pupil planning

- results of Eight Year Study

- Community Based Program

- independent study

- learning styles

    iv) empirical studies

5. Is self-directed learning appropriate and possible for the primary child?

6. What principles of self-education does the research provide?

7. Summary of the Literature Review

Chapter 2

LITERATURE REVIEW

A unified body of research literature on the subject of self-directed learning as it applies to everyday living and to formal schooling does not currently exist. On the one hand, there is a great body of literature which has relevance to self-directed learning because it is virtually impossible to write about learning without making reference to learning on one's own. The context of such learning, however, generally takes place in the confines of a regular classroom and under the direction of a teacher. Concepts such as independent study, inquiry learning and open education do indeed fall into the broad category of self-directed learning. There remains, however, the assumption that the learner is essentially dependent and that the teacher has complete responsibility for what and how the learner is taught. On the other hand, there is a very meagre body of literature that investigates self-directed learning as a means for preparing individuals of all ages to become self-directing in their day to day living and learning. It is the kind of learning in which the learner engages without the support of an

institution to guide him in order that he might
become a self-directing individual who can apply the
principles and concepts of self-direction to the
learning problems of everyday living as well as to
the practice of formal education.

The study of self-directed learning embraces a
broad spectrum of definitions, concepts and beliefs.
A wide variety of literature on the topic has been
surveyed and researched for relevant information.
In addition selected works referring specifically to
self-directed learning have also been identified and
examined. Although each of the works raises issues
and ideas of importance to self-directed learning,
the following questions have been identified by the
writer as most relevant to this thesis:

1. What is self-directed learning?

2. What components comprise a successful
    self-directed learning program?

3. What student characteristics and atti-
    tudes are evident in a successful self-
    directed learner?

4. Why teach for self-directed learning?
    What research is there to support its
    inclusion in a regular school program?

5. Is self-directed learning appropriate
   and possible for the primary child?

6. What principles of self-education does
   the research provide?

1. WHAT IS SELF-DIRECTED LEARNING?

What has emerged from an examination of the
literature for this study is the notion that there
are several underlying assumptions about the learner
and learning which have a direct bearing on the
writer's perception of a definition of self-directed
learning. The first such assumption is that learning
takes place within the learner; that the only essen-
tial part of an educational system is the learner;
and that the learner can and does, in fact, often
learn in the absence of a teacher. This is supported
by Gleason's assertion that:

> Learning is an individual act, a set
> of events which take place entirely
> within the learner. In fact, it is a
> highly idiosyncratic event, and de-
> pends very much on the nature of the
> learner, particularly on his own past
> learning. Gleason (1967, p. 30).

The learner is then, in a fundamental sense responsible for his own learning and giving the learner responsibility for his own learning seems a feasible thing to do. Knowles explains that:

> ...there is convincing evidence that people who take initiative in learning (proactive learners) learn more things, and learn better, than do people who sit at the feet of teachers passively waiting to be taught (reactive learners).
> ...They enter into learning more purposefully and with greater motivation. They also tend to retain and make use of what they learn better and longer then do reactive learners. Knowles (1975, p. 14)

Learning is an intensely personal, active and creative process and learning initiative must come from the actual needs of each individual learner. Combs states that:

> The discovery of meaning ... only takes place in people and cannot occur without the involvement of persons in the process. Combs (1967, p. 3).

Students cannot, therefore, be regarded as passive internalizers of information provided and controlled by external agents. It is the active reaching out of the individual that will lead to

effective learning and personal growth. Kidd
explains this process when he says:

> ...learning is the active, not the
> passive, part of the process: the
> learner opens up himself, stretches
> himself, he reaches out, he incorpor-
> ates new experience, he relates it to
> his previous experience, he recog-
> nizes this experience, he expresses
> or unfolds what is latent within him.
> Kidd (1959 p. 15).

The learner in this way becomes the centre of
his own learning. Each experience in which he
engages becomes an integral part of him and a source
of personal meaning. This discovery of meaning from
experience must be done by the learner himself
instead of being ordered or controlled by an external
instructional agent. Combs (1967 p. 76), Holt
(1976 p. 5). Gibbons and Phillips sum up:

> In schools teachers do most of the
> initiating; they are the major actors
> to their largely passive student
> audiences... This general practice
> of managing student effort does not
> develop the initiative they will need
> to manage their own education.
> Gibbons & Phillips (1980 p. 6).

A second underlying assumption of self-directed learning is that all children can become self-directed. The broad goals of education are usually expressed in terms of developing student maturity and competence. According to Faure:

> The physical, intellectual, emotional and ethical integration of the individual into a complete man is a broad definition of the fundamental aim for education. Faure (1972, p. 156).

Inherent in this goal is the provision for self-direction. Students in a formal heterogeneously grouped classroom, for example, are expected to perform at various levels of maturity, competence and skill. Although the learner may be performing at a minimum competency level it is reasonable to expect that he can also direct his own learning at that level provided he is taught the necessary skills and is provided with a suitable climate for self-growth. Rogers (1973, p. 76), Stephens (1974, p. 16), Thatcher (1973, p. 76). Gibbons explains that:

> All education is self-education in the same way that all jumping is high jumping. Just as sure as you can distinguish a high jump from an ordinary jump, you can distinguish self-

directed education from teacher-directed education, even though the individual ends up doing the learning - or the jumping - in both instances. Gibbons (1980, p. 51).

Having integrated various definitions from current literary sources, Huget describes self-directed learning as:

...the lifelong, volitional process by which individuals design and execute their personal and performative development in relationship to the changing circumstances and unalterable conditions of their lives. It is a holistic process in which individuals engage in a search for meaning relatedness and identity. Huget (1982, p. 4).

According to the definition self-directed learning is a lifelong learning process. Learning is no longer the prerogative of the young or of individuals enrolled in educational institutions but occurs at any age; learning is a prerequisite for day to day living. In order to cope effectively with the complexities of today's world, where knowledge and technology are accelerating at a pace far greater than the capacity of the human brain to absorb them, it is imperative for learners to learn without being taught. Della Dora (1979, p. 8), Heintz (1975, p. 13), Knowles

(1975, p. 15), Rogers (1969, p. 2), Toffler (1970, p. 241). In our rapidly changing world Rogers claims that:

> The only man who is educated is the man who has learned how to learn; the man who has learned how to adapt and change; the man who has realized that no knowledge is secure, that only the process of seeking knowledge gives a basis for security. Changingness, a reliance on process rather than upon static knowledge, is the only thing that makes any sense as a goal for education in the modern world. Rogers (1969, p. 2).

Education as described by Rogers can no longer be confined to a classroom or to formal educative situations. Learning must be integrated with the challenges of real life in order to prepare individuals to meet the demands of their personal futures. The realities of the modern world require individuals to keep growing and developing throughout their lives. Lifelong learning as an educative aim is, therefore, not only desirable but necessary. Faure (1972, pp. 34, 35), Gibbons (1980, p. 42), Holt (1976, p. 72), Maslow (1971, p. 170). According to Gardner:

> Education can lay a firm base for a
> lifetime of learning and growth.
> Inner resources must be developed to
> the point where the individual can
> and will want to learn on his own.
> Gardner (1964, p. 31).

The focus of formal education then should be to prepare the broad base for a lifetime of self-directed learning for each individual. Gardiner (1964, p. 13), Gibbons (1980, p. 53). In Faure's words the situation calls for:

> Learning to live, learning to learn,
> so as to be able to absorb new knowl-
> edge all through life; learning to
> think freely and critically; learning
> to love the world and make it more
> human; learning to develop in and
> through creative work. Faure (1972,
> p. 69).

The notion of lifelong learning necessitates a redefinition of the concept of education. The traditional concept of education as simply the administration of classrooms designed to transfer specific knowledge does not prepare students to direct their own future learning. Gibbons (1980, p. 51), Knowles (1975, p. 16 - 17), Tough (1977, p. 1). A more appropriate view is suggested by Faure:

> School education must be regarded not

> as the end but the fundamental com-
> ponent of total educational activity,·
> which includes both institutionalized
> and out-of-school education....Briefly,
> education must be conceived of as an
> existential continuum as long as life.
> Faure (1972, p. 233).

According to this view education must focus on the learner. The responsibility of the educator is to prepare students to competently assume their roles as self-directing and self-responsible lifelong learners. The need is to effectively combine teacher-directed and self-directed approaches. Knowles supports this view by stating that:

> When a person leaves schooling he or
> she must not only have a foundation of
> knowledge acquired in the course of
> learning to inquire, but, more impor-
> tantly, also have the ability to go on
> acquiring new knowledge easily and
> skillfully the rest of his or her life.
> Knowles (1975, pp. 15, 16).

Whether they do so consciously or not people keep on learning throughout their lives. They continuously struggle to cope with life's problems and those experiences which mould their behaviour. Education for self-directed learning then is education for living. Gardner (1964, pp. 11, 12), Gibbons (1980, p. 42), Knowles (1975, p. 20), Stevens (1971, p. 247).·

According to Huget, therefore, schooling becomes the sub-set of the lifelong process of self-education. Huget (1982, p. 178). Life itself is the educational forum where the learning continuum takes place. Gibbons sums up by saying:

> ...when school days end, even the best educated have forty or fifty years of life and learning still ahead of them... Continued growth during these out-of-school hours and years requires continued learning - learning to master new jobs, to become better lovers, to meet life's crises, to find new interests, to handle changes in society, to master new roles, to open new dimensions in ourselves and our relationships, and to make contributions worthy of our capacities. Gibbons (1980, p. 42).

Numerous references in the literature support the notion that self-directed learning is a volitional process. It is education taken as distinct from education given. Combs (1967, p. 76), Huget (1982, p. 4). It is the intentional attainment of knowledge. According to May there can be no meaning apart from intention. Each conscious act tends toward a direction or action. May elaborates when he writes that:

> Cognition, or knowing and conation, or

> willing then go together. We could
> not have one without the other. This.
> is why commitment is so important. If
> I do not will something I could never
> know it; and if I do not know some-
> thing, I would never have any content
> for my willing. (May 1969, p. 230).

In order to effect his own learning, therefore, the
individual must be involved in the volitional act of
making his own meaning. This means that the locus of
control lies within the learner himself. This estab-
lishment of internal control increases available
options to the learner and consequently the ability
to guide and direct responses. Gibbons (1980, p. 53),
Knowles (1975, p. 60). According to Assagioli it is
this volitional aspect of self-directed learning that
makes it such a powerful educative force. He explains
that:

> Fundamental to inner power is the un-
> realized potency of man's own will.
> Its training and use constitute the
> foundation of all endeavours. Assag-
> ioli (1974, p. 6).

Will then is the energy of intention. And it is the
effective mobilization of this energy which becomes
the central force in the individuals quest for learn-
ing. Assagioli (1974, pp. 10 - 12), Maslow (1968,

pp. 45 - 49).

The volitional nature of self-directed learning implies freedom of choice. It does not seem reasonable, therefore, to impose freedom on anyone who does not desire it. According to Gibbons a person who chooses what to learn can also decide not to learn. Gibbons (1980, p. 4). Rogers supports this by saying that:

> ...when a group is offered the freedom
> to learn on their own responsibility,
> there should also be provision for
> those who do not wish or desire this
> freedom and prefer to be instructed
> and guided. Rogers (1969, p. 134).

The volitional aspect of self-directed learning according to the literature would allow individuals greater freedom to reach towards and pursue new knowledge, skills, relationships and accomplishments.

Throughout the literature reference is also made to the holistic aspect of self-directed learning. Heintz, Fieweger and Fitzgerald write that:

> Today's world needs a "together" per-
> son in order to cope with life. This
> means that you need to be creative;
> you need to be able to relate on a
> feeling level; you need to know how to
> think critically; you need to clarify
> your values. Facts alone won't do.

Content simply isn't enough. Heintz,
Fieweger and Fitzgerald (1975, p. 13).

Education then is viewed as a process of learn-
ing and growth which develops the total person. Holt
(1976, p. 72), Maslow (1968, p. 99), Rogers (1969,
p. 105). Faure writes that the aim of educational
development is:

> ...the complete fulfillment of man, in
> all the richness of his personality,
> the complexity of his forms of expres-
> sion and his various commitments -- as
> individual members of a family and of
> a community, citizens and producer,
> inventor of techniques and creative
> dreamer. Faure (1972, p. vi).

Accounts of individuals who have become success-
ful through self-education indicate that characteris-
tics of a holistic nature contributed to their suc-
cess. Named specifically are such attributes as
integrity, self-discipline, perseverance, industri-
ousness, altruism, interpersonal competence and inde-
pendent thought and creativity. Gibbons (1980, p. 54).
According to various writers there is a need for the
inclusion of the development of such attributes in
today's educational aims. Faure (1975, p. 217),
Gibbons and Phillips (1980, p. 6), Holt (1976, p. 71),
Rogers (1967, p. 3), Silberman (1971, p. 134), Tough

(1971, p. 175). Gibbons elaborates on this theme:

> Teaching for self-education should
> promote, model and reward the devel-
> opment of personal integrity rather
> than the opportunistic pursuit of
> offered rewards, of self-discipline
> rather than obedience, of inner drive
> rather than avoidance of punishment
> or the pursuit of artificial rewards,
> of caring rather than sustained com-
> petition and of strong internalized
> principles rather than externally
> imposed rules...teaching for self-
> education involves promoting drive
> rather than dependence, originality
> rather than conformity, and the tal-
> ents that make individuals unique
> rather than the tasks that make them
> all act the same. Gibbons (1980,
> pp. 53, 54).

The task of education for self-directed learning then involves education towards what Rogers describes as "the fully functioning person". A person who can experience fully with all his feelings and reactions; who is able to select from a multitude of possibilities; who trusts in his own judgement and is willing to take the consequences of his actions; who because of his openness to new evidence and his ability to sift through it discovers he is realistically social; who lives completely in this moment but is aware of its implications for the future. Rogers (1975, p. 288).

Having looked at the major components of the

proposed definition for self-directed learning it is
also necessary to examine some of the other most
relevant aspects of this educative process. Accord-
ing to Combs and other advocates of self-directed
learning responsibility and self-direction are
learned. This is truly essential because they are
the link between the learner's life and his learning.
And although learning and growth involve other people
it is the individual who must choose and conduct his
own process of life change. Gleason (1967, p. 81),
Gross (1977, p. 22), Knowles (1975, p. 18), Ryan
(1974, p. 7), Silberman (1971, p. 135). Combs writes
that responsibility and self-direction:

> ...must be acquired from experience,
> from being given opportunities to be
> self-directing and responsible. You
> cannot learn to be self-directing if
> no one permits you to try. Combs
> (1975, p. 81).

The direction that such experiences and opportunities
should take are explained by Della Dora:

> ...students need to have opportunities
> to learn how to choose what is to be
> learned, how it is to be learned, and
> how to evaluate their own progress.
> Della Dora (1979, p. 1).

A major objective for self-directed learning then is
to induce the learner to assume increased responsi-
bility for his own learning. He is encouraged to
take the initiative for both the direction and thrust
of his learning dictated by his own interests. ·This
will enable him to manage his own education both in
the present and the future. Beggs & Buffie (1969,
p. 197), Della Dora (1979, p. 16), Gibbons & Phillips
(1980, p. 6), Gleason (1967, p. 80), Gross & Murphy
(1964, p. 109), Heinz, Fieweger & Fitzgerald (1975,
p. 4), Rogers (1975, p. 105), Silberman (1971, p. 91),
Stephens (1974, p. 22). Knowles explains this by
saying:

> In its broadest meaning, "self-directed
> learning" describes a process in which
> individuals take the initiative, with
> or without the help of others, in diag-
> nosing their learning needs, formulat-
> ing learning goals, identifying human
> material resources for learning, choos-
> ing and implementing appropriate learn-
> ing strategies and evaluating learning
> outcomes. Knowles (1975, p. 18).

The motivational conditions for self-directed
learning as described by Knowles are considered
intrinsic. Supporters of this theory agree that self-
directed learners are primarily motivated by internal

incentives. This is also true of the child who is by nature curious, eager to discover, eager to know and eager to solve problems. Della Dora (1979, p. 9), Donaldson (1978, p. 116), Gibbons & Phillips (1980, p. 10), Knowles (1975, p. 21), Rogers (1969, pp. 131, 157), Thatcher (1973, p. 36). Bruner sums this up by saying:

> ...children have a natural desire to learn because it satisfies such universal needs as curiosity, the striving towards competence, and the enjoyment of "reciprocity". Their learning, then, does not require external reinforcement...The preferable way is to develop the classroom environment and the teacher-student relationship in such a way that the intrinsic predisposition to learn can be freely expressed. Bruner in Morris (1978, p. 160).

Self-directed learning then as defined in the literature describes a process which prepares the individual for a lifetime of effective learning. It is a volitional process by which individuals take the initiative to develop themselves and through the effective application of personal will make choices which promote their individual growth. According to Holt, it is education taken as distinct from education given where the motivation for learning is intrinsic and the responsibility for learning is in the hands of

the learner. Holt (1976, p. 1). Della Dora's proviso,
however, is important. Concerning the learner he
writes that:

> ...the degree of their ability to be
> responsible is a function of the indi-
> vidual's capability (affected by age
> or stage of development) and that it
> is also a function of what teachers,
> parents and others know about how to
> help students become self-directed and
> responsible. Della Dora (1979, p. 9).

Gibbons and Phillips although recognizing the need for
a greater emphasis on self-directed learning in the
schools also recognize the limitations for self-
directed learning within the existing formal educa-
tional institutions. They suggest that:

> The skills can be taught and practiced
> in schools, teachers can gradually
> transfer the authority and responsi-
> bility for self-direction to students,
> and self-educational acts can be simu-
> lated, but self-education can only
> truly occur when people are not com-
> pelled to learn and others are not
> obligated to teach them -- especially
> not to teach them a particular subject-
> matter curriculum. Gibbons & Phillips
> (1980, p. 4).

2.   WHAT COMPONENTS COMPRISE A SUCCESSFUL SELF-
     DIRECTED LEARNING PROGRAM?

An examination of any successful learning program

must include a discussion of the selection of content for the program, the role of the teacher, the role of the student and the climate which is necessary to ensure the success of the program.

The literature reveals that the selection of content for any self-directed learning situation is dependent upon the needs and wishes of the learner. Brown (1969, p. 101), Combs (1959, pp. 370 - 371), Combs (1967, p. 73), Gibbons & Phillips (1980, p. 4), Gleason (1967, p. 2), Gorman (1974, pp. 13, 18), Malehorn (1978, p. 4), Rogers (1967, p. 3), Tough (1971, p. 5). The reason why this is necessary, Combs argues, is that the individual will "differentiate" only that which satisfies his immediate needs. Control of learning, therefore, is essentially in the hands of the learner rather than the teacher even when curriculum content is prescribed. Combs (1957, p. 368).

The basic content for a self-directed learning program then is process oriented. The reason for this according to numerous writers is that the tremendous expansion of knowledge in the past few decades continually threatens to render much of the specific content of many fields obsolete even as it is being taught.

Della Dora (1979, p. 5), Gibbons & Phillips (1979, p. 27), Gleason (1967, p. 80), Heinz, Fieweger, Fitzgerald (1975, p. 13), Knowles (1975, p. 37), Malehorn (1978, p. 9), Stephens (1974, p. 15). Rogers sums this up by saying that:

> Changingness, a reliance on process
> rather than upon static knowledge, is
> the only thing that makes any sense as
> a goal for education in the modern
> world. Rogers (1969, p. 104).

Gibbons and Phillips in an article on teaching for self-education indicate that students should be taught how to conduct processes involved in designing, implementing and managing their own learning. The skills include:

1. Access Skills. Skills such as
   reading, speaking and writing,
   which are essential for gaining
   access to knowledge and skill.

2. Mastery Skills. Studying, prob-
   lem solving, and organizing skills
   which are essential for mastering
   a body of knowledge or skill.

3. Planning Skills. Decision making
   skills. How to decide on a learn-
   ing program. What goals? What
   experiences? What means of evalu-
   ation?

4. Management Skills. Skills neces-
   sary for managing time, effort and

resources needed for learning

5. Interpersonal Skills. Skills of
    learning to relate to people of
    all ages and to assume different
    roles successfully: a teacher of
    children, an aide to the elderly,
    a competent worker on the job,
    and so on. Gibbons & Phillips
    (1979, p. 27).

The authors of the article are also cognizant of

the fact that once children realize that they are

indeed responsible for their own learning, many will

have difficulty deciding what to learn. Gibbons &

Phillips explain that:

> Most will be unable to organize their
> time and keep to their own schedules.
> When difficulties arise, many will
> want to give up. Teachers in dealing
> with these issues, are addressing the
> fundamental problems of learning.
> Gibbons & Phillips (1979, p. 28).

Inherent in this concept of learning is the

notion that student involvement in the evaluation of

their efforts is, in itself, an important learning

activity. Della Dora (1979, p. 7), Gorman (1974,

p. 163), Knowles (1975, p. 134), Malehorn (1978,

p. 137). According to Gibbons and Phillips evaluation

should be an integral part of the student's learning.

They write that:

> In self-education, people usually
> evaluate themselves in the perform-
> ance of the activity they are
> attempting to master and they evaluate
> in order to measure their progress and
> to help them decide what to learn next.
> ...In self-education, people...compete
> with their own previous performance and
> so may always be successful in improv-
> ing and extending. Gibbons & Phillips
> (1980, p. 9).

The teacher then in a self-directed learning sit-
uation becomes a facilitator of learning. That is, he
takes on the responsibility of helping students de-
velop competence as self-directed learners. Gibbons
& Phillips (1979, p. 27), Knowles (1975, p. 39),
Malehorn (1978, p. 30), Rogers (1969, p. 104).
Accordingly then the teacher divests himself of the
protective shield of an authority figure and exposes
himself as a person with feelings, hopes, aspirations,
insecurities, worries, strengths and weaknesses. He,
in fact, becomes a co-learner instead of an expert.
Knowles (1975, pp. 33, 34), Malehorn (1978, p. 40).
Gordon supports the assumption that children resume
greater responsibility and independence when the
teacher takes on a nondirective role. He writes:

> The more dependent the group is upon
> its leader, the more his contribution

> will inhibit the participation of other
> members. The greater the status or
> prestige differential is between the
> leader and the members (as perceived
> by the members), the more likely the
> leader's contributions will inhibit
> participation of the members. Gordon
> in Gorman (1974, p. 133).

The teacher's function then as a facilitator of learning is to help students 'in diagnosing their learning needs, formulating goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes.' Knowles (1975, p. 18). Also: Chase (1975, p. 8), Frankl (1969, pp. 12, 51), Gardner (1963, p. 115), Gibbons and Phillips (1980, pp. 6 - 9).

The vehicle for successful self-directed learning is the use of a contract or other plan of action where the student is guided to set realistic goals, to plan suitable means of achieving his goals, and to design methods of evaluating his achievements. Della Dora (1979, pp. 5, 6), Gibbons, Norman & Phillips (1980, p. 3), Glaser (1977, p. 323), Heinz, Fieweger & Fitzgerald (1975, p. 51), Stephens (1974, pp. 138, 139).

According to Gleason there are several basic

factors which are necessary to ensure the success of the program and which will make it emerge as a response to invitation and challenge. These, he says, are:

> ...the human responses: challenge,
> invitation, stimulation of imagin-
> ation, confirmation, letting be,
> honest disclosure, and willingness
> to enter into dialogue. Gleason
> (1967, p. 95).

The success of the program also depends on the teacher's ability to create a supportive climate where the greatest student potential can be released; a climate which is conducive to mutual respect; a climate where mutual caring and support are evident; a climate where both parties are clear about their respective goals; a climate which encourages and promotes dialogue. The climate which promotes self-directed learning then must be one which is facilitative rather than directive. Beggs & Buffie (1969, p. 140), Combs (1949, p. 389), Della Dora (1979, p. 2), Gibbons (1980, p. 54), Gorman (1974, p. 39), Knowles (1975, p. 9), Rogers (1969, pp. 162, 163), Thatcher (1973, pp. xiii, 65).

3. WHAT CHARACTERISTICS AND ATTITUDES ARE EVIDENT

   IN THE SUCCESSFUL SELF-DIRECTED LEARNER?

An examination of the literature regarding the nature and behavior of individuals who are becoming more self-directed reveals that the self-directing individual is one who has a positive view of self. Through multiple experiences, various reactions to his environment and through self-educative acts the self-directing individual develops a positive concept of himself as a non-dependent and self-directing person. Combs (1949, p. 377), Knowles (1975, p. 64), Ringness (1975, p. 32), Rogers (1961, pp. 22, 23), Tough (1971, p. 28). Gross points out that:

> Your learning like your life, will
> take its shape and draw its energy
> from your values and priorities. I
> have spoken of learning as a "lever
> for life-change". The fulcrum of
> that lever is this sense of yourself -
> who you are, what you need and want,
> what you seek to become. It is this
> self concept that gives meaning to
> everything you learn. Gross (1977,
> p. 67).

The self-directed learner is also described as an individual who pursues his potentialities in order to fulfill the full range of his capacities. He is

furthermore governed by his quest for meaning. He seeks the kinds of experiences that will enlarge his knowledge and enrich his personal world. Combs & Snygg (1949, pp. 17, 21), Gardner (1963, p. 13), Knowles (1975, p. 86), Maslow (1971, pp. 48, 49), Rogers (1969, p. 158).

The self-directing individual is also creative in attitude; that is he is able to give up his initial perception of a problem and redefine it. This special way of looking at life leads to intelligent and innovative achievements. Combs & Snygg (1959, p. 207), Gallagher (1975, p. 246), Gardner (1963, p. 46), Gibbons (1980, p. 47), Maslow (1971, p. 290), Tough (1971, p. 175).

Another characteristic of the self-directing individual is his responsible and responsive relationship with others. Gibbons (1980, p. 47), Maslow (1972, p. 155), Rogers (1961, pp. 331, 336), Tough (1971, p. 28). Gilmore substantiates this by saying that a characteristic generally found in:

> ...productive persons as a group is
> a mature social awareness and concern
> in the broad sense of the term.
> Their contributions are motivated
> directly or indirectly, by an empath-
> ic, altruistic and sympathetic feel-

ing not only for specific individuals,
but for humanity in general. Gilmore.
(1974, p. 228).

In self-directed learning situations the self-
directing individual has the major responsibility for
the purposes and methods of learning. Responsibility
to him is a challenge and he is willing to take risks
in the pursuit of excellence. Della Dora (1979, p. 4),
Gibbons (1980, p. 52), Knowles (1975, p. 60), Maslow
(1968, p. 29), Stephens (1974, p. 16), Thatcher (1973,
p. 105), Tough (1971, p. 5). Holt supports this by
saying that:

> The most valuable and indeed essen-
> tial asset the student brings to any
> learning is a willingness to adven-
> ture, to take risks. Without that,
> he can't learn anything. Holt (1976,
> p. 71).

Knowles in his book Self-Directed Learners summa-
rizes in a list those competencies he feels are essen-
tial for the self-directed learner to be successful.
The competencies are written as a self-rating instru-
ment for the learner.

> 1. An understanding of the differ-
>   ences in assumptions about
>   learners and the skills required
>   for learning under teacher-

directed learning and self-
directed learning, and the
ability to explain these dif-
ferences to others.

2. A concept of myself as being a
    non-dependent and a self-direct-
    ing person.

3. The ability to relate to peers
    collaboratively, to see them as
    resources for diagnosing needs,
    planning my learning, and learn-
    ing; and to give help to them
    and receive help from them.

4. The ability to diagnose my own
    learning needs realistically,
    with help from teachers and
    peers.

5. The ability to translate learn-
    ing needs into learning objec-
    tives in a form that makes it
    possible for their accomplish-
    ment to be assessed.

6. The ability to relate to teachers
    as facilitators, helpers, or con-
    sultants, and to take the initia-
    tive in making use of their
    resources.

7. The ability to identify human and
    material resources appropriate to
    different kinds of learning
    objectives.

8. The ability to select effective
    strategies for making use of
    learning resources and to perform
    these strategies skillfully and
    with initiative.

9. The ability to collect and vali-
    date evidence of the accomplish-
    ment of various kinds of learning

objectives. Knowles (1975,
Learning Resource B, p. 60).

4. WHY TEACH FOR SELF-DIRECTED LEARNING? WHAT

RESEARCH IS THERE TO SUPPORT ITS INCLUSION IN

A REGULAR SCHOOL PROGRAM?

 a) Why teach for self-directed learning?

Many of the reasons for helping individuals

become self-directed learners have already been

mentioned in the course of this review. There-

fore, only three reasons which seem particularly

relevant for present educational consideration

will be presented here.

> i) By teaching individuals how to become
>
> self-directed we are teaching them a
>
> process necessary for day to day
>
> living and for the rest of their
>
> lives.
>
> ii) Autonomy, initiative and competence
>
> are the essentials of human develop-
>
> ment. They are the ingredients nec-
>
> essary for any individual to become
>
> a mature, responsible person.
>
> iii) Students need to develop responsibil-

ity for their own learning, for their
own lives and for the community.

i) There is substantial support in the literature
recommending that individuals be taught to become
self-directed. Those who feel that educational
changes should reflect the changing needs of society
recommend a process approach that would not only teach
them the skills needed for independent learning but
also for lifelong learning. The process approach de-
emphasizes learning of specific material in favour of
teaching children how to learn. It seeks to aid
children to direct their own learning; it encourages
them to pose their own problems and solve them by
various methods; it trains them how and when to use
their knowledge. The child is also encouraged to
identify the style or process of learning that is most
effective for him and would best enable him to pursue
independent studies. Glaser (1977, p. 322), Knowles
(1975, pp. 39 - 42), McCallum (1928, p. 3), Malehorn
(1978, p. 9), Rogers (1969, p. 163), Toffler (1970,
p. 21).

The contention is also that process rather than
content leads to increased knowledge because it elim-

inates the garnering of unrelated and isolated facts.
Stephens writes that:

> The child whose learning is self-
> directed but who is satisfied with
> superficial investigations, flitting
> from one topic to another has not
> adequately learned the process of
> education. Stephens (1974, p. 15).

It is also argued that totally content centred
curricular models do little to prepare individuals for
adult autonomy which will help them to cope and deal
effectively with the changing conditions and realities
of their everyday lives. Faure describes what he
feels is needed:

> Basic education must be many sided,
> designed not only for children and
> adolescents but also for adults who,
> at any age, may have need of it.
> While dispensing fundamental knowl-
> edge, such education aims at learn-
> ing how to perceive and comprehend
> the world. It must endeavour to
> instill, especially in children, a
> taste for self-learning that will
> last a lifetime; to arouse their
> desire to know, to ask questions
> and to question themselves. Faure
> (1972, pp. 16, 17).

ii) According to self-directed learning proponents
education must be accepted as a process of maturation

through which each individual develops the capacity
to direct and control his learning. Combs & Snygg
(1959, p. 313), Faure (1972, p. 81), Gibbons (1980,
p. 42), Gibbons & Phillips (1980, pp. 2, 3). It is
the support and encouragement of this natural matura-
tion process toward self-direction that allows the
student to exercise increasing control over his
personal learning. Knowles explains that:

> Self-education assumes that the human
> being grows in capacity (and need) to
> be self-directing as an essential
> component of maturing, and that this
> capacity should be nurtured to devel-
> op as rapidly as possible. Knowles
> (1975, p. 20).

Because self-directed learning cultivates in individ-
uals those decision making skills required to suc-
cessfully direct personal growth and development, it
becomes the essential ingredient for any individual
to become a mature, autonomous and competent person.

iii) Another frequently mentioned reason for teach-
ing individuals to become self-directed is that stu-
dents need to develop responsibility for their own
learning both in their day to day living and in their
relationships with others in the community. Brown

(1964, p. 109), Gibbons (1980, p. 52), Gleason (1967, p. 32), Knowles (1975, p. 60), Pflum (1974, pp. 16, 17), Stephens (1974, p. 22), Taylor (1969, p. 32). The need then is to establish an internal locus of control. This idea of intrinsic motivation is integral to the concept of self-direction because learning that is self motivated is closely related to personal and purposive learning. McLeish (1976, p. 35), Maslow (1971, p. 192), Morris (1978, p. 160), Rogers (1969, p. 23), Stephens (1974, p. 21).

Intrinsic motivation is also essential to the self-directing individual because it increases available options and subsequently leads to greater personal freedom. When the learner guides and directs his own responses he is no longer just reacting to external events, but rather he is proactive to his living and learning. The learner learns how to act out of choice rather than necessity. Knowles (1975, p. 105), Pflum (1974, p. 29), Rogers (1969, p. 158). The learner then is able to create his own structures within his own personal world so that he can live as a free self-directing individual harmoniously and interdependently with others in his community.

Combs & Snygg (1959, pp. 17, 264), Gardner (1963, pp. 6, 45), Maslow (1971, p. 183), Rogers (1961, pp. 65, 66)..

4.   b)   What research is there to support the
            inclusion of self-directed learning in
            a regular school program?

Although there is a substantial body of literature which supports the essential ideas inherent in the concept of self-directed learning there is very little experimental research which directly relates to self-education. However, the many influences which at first indirectly and later very directly reflect the self-directed learning viewpoint can clearly be traced. Early influences which support this theory can be seen in the views expressed by the progressive education movement. John Dewey, for example, saw the child's own motivation to resolve a problem as the impetus for learning. He advocated that more formal methods of teaching which prepared the child for a "suppositious" future be abandoned and that the child be allowed to choose to learn those things of interest to himself. Dewey (1963).

Maria Montessori's approach also stresses the

need for an environment in which the child is free to choose his activities from a number of specified tasks. And, although children in her schools operated in a prepared environment children were given opportunities to make choices and were recognized and treated as being individually unique. Stephens (1974, p. 4).

The work of Piaget has also offered insights into children's thinking which have influenced supporters of self-directed learning. Basic to an understanding of Piaget's thinking is the idea that the child has his own concepts of reality, which serve as reference points against which he tests and redefines new experiences. An important implication for educational practice, for example, is Piaget's insistence that at any given point a child can learn only what is appropriate to his developmental stage. This requires an understanding of children's ways of reasoning at different periods before a curriculum can be planned. Equally important is Piaget's assertion that not all children reach the same developmental stage at the same chronological age. He also reaffirms the ineffectiveness of lecturing young children. Instead he points

out children's needs for concrete experiences, for frequent opportunities to explore their environment and to interact with other students and adults, as well as with materials. Piaget (1970).

Jerome Bruner, who in the 60's directed his attention to education, emphasized the importance of children's involvement in their learning. He recognized curiosity as a motivating force and has argued for the "discovery" approach to learning. Bruner argues that a subject should be taught not to "spectators" but to "participants". Bruner (1970, p. 166).

Another significant contribution of the 60's was the growing influence of the humanistic psychologists such as Maslow, Rogers, May, Fromm, Combs, Erickson, Glaser and others who believed to one degree or other that man has control over his destiny, that people can become aware of and control the forces affecting them, can make choices, can respond freely and intelligently to solve problems, and can grow toward becoming fully functioning, self actualized integrated people. Chase (1975, pp. 4, 5).

Perhaps most clearly identified with the concept

of self-directed learning is Rogers who insists that the quality of the relationship between teacher and learner and the classroom environment and climate are the decisive ingredients in education. He contends that within an environment of acceptance children can be trusted to assume responsibility for their own learning. According to Rogers, material that can be taught to another is of little consequence. It is knowledge discovered for oneself that is most significant. Rogers (1969).

The last decade has seen educational practices increasingly coming under attack for failing to meet the demands of a rapidly changing society. Writers decry the inadequacy of teaching yesterday's way to tomorrow's children. Stephens (1974, p. 6). Radical reformers such as Illich, Holt, Silberman, Dennison and Postman insist that existing educational institutions are no longer defensible, that alternatives to present schooling be found. Holt (1976), Illich (1971), Silberman (1970). And although their criticisms seem harsh they have also been perceptive. They helped to create a climate for change which has contributed to the acceptance of many alternative educational changes and practices.

A number of specific educational practices which contribute to some aspect of self-directed learning even though it may be a relatively narrow area are also included in the literature. A study that stimulated interest in teacher-pupil planning was conducted by Lewin, Lippitt and White concerning the effects of adult leadership styles on elementary school age children. This was an attempt to promote and encourage student involvement in decision making. White & Lippitt (1960). They compared styles described as "democratic", "autocratic" and "laissez-faire". The results tended to support the democratic style which favoured the teacher-pupil planning. Next most effective was the autocratic or teacher-directed style and least effective was the laissez-faire style.

Results of the Eight Year Study carried out by the Progressive Education Association in the 1930's and early 40's compared the progress of students in experimental programs with those in traditional programs. The results indicated that students given a choice of subjects or planning with teachers within classes or both did as well or better than their counterparts academically and in leadership roles as well as in athletics and in other extra-curricular aspects of

college life. It was also found that those students who had made the greatest changes from the traditional high school program were significantly more successful in college. Aikin (1942).

Della Dora describes both the Community Based Program of the 30's and the Citizen Education Programs of the 50's as school movements based on the premise that the total community is responsible for educating its young. The relevance of the programs to self-directed learning is summarized by Della Dora. He writes that the program calls for students to:

1. Take increased responsibility for their own learning as they select projects to work on in the community

2. Develop individual and group plans for achieving goals

3. Clarify values and establish goals consistent with their values

4. Exercise self-discipline needed to carry out school and community projects

5. Become familiar with the wide variety of school resources and community resource materials needed to carry out "live," ongoing projects

6. Learn how to report to others in various ways about what their findings are

7. Discover when and how to ask for help as it is needed

8. Be capable of participating with other students and with adults in group decision-making processes. Della Dora (1979, p. 16).

Gowan, Demos and Torrance report several relevant findings in their book on creativity. They write that:

the characteristics of authoritarian personality are the antithesis of the creative attitude we seek. Creative behavior is characterized by variety and richness of perception. Whatever produces narrowness and rigidity becomes an important factor in limiting creativity. Gowan (1969, p. 130).

The evidence from the work of Adorno and his associates on the Authoritarian Personality reveals that a person who is insecure, distrustful of self -- who feels threatened by life and is otherwise inadequate -- tends to have a cognitive style which is rigid, concrete and acquiescent. The more active, able, secure, relaxed individual, on the other hand, is able to perceive and think in ways that are flexible and is on the whole better adapted to meet the objective demands of the situation in which he finds himself. Adorno (1950).

Another relevant study recorded by Rokeach and
Frankel-Brunswick in their book The Open and Closed
Mind, suggests that the more closed the mind, the more
cognitions depend upon irrelevant wants and external
authority. It was found that the open-minded group
was significantly superior to the closed-minded group
in solving problems and appeared to reflect a greater
willingness to entertain novel and strange ideas. The
writers propose that people who are intolerant of
ambiguity are relatively "closed" to new information
which would increase the richness of their intellec-
tual resources. Such people would rather seek simpli-
fied solutions to complex social, political and eco-
nomic issues. Rokeach (1960).

A basic requirement for successful self-directed
learning is the knowledge of one's own learning style.
According to Dunn and Dunn a knowledge of learning
styles and application of that knowledge places the
emphasis on the learner and the psychological process
of learning. Dunn & Dunn (1978, p. 3). The writers
have developed a learning style questionaire which
considers environmental, emotional and physical stim-
uli. Their studies suggest that there are many inter-
relationships between how individuals prefer to learn

and their achievement. They maintain that when students learn through the methods each prefers, they learn more effectively. Dunn & Dunn (1978, p. 389).

Independent study is another practice which according to Della Dora can assist self-directed learning if it is viewed as one of many modes of learning from which students may choose. One of the problems related to independent study is the lack of a generally agreed upon definition. Della Dora (1979, p. 31). Beggs and Buffie, for example, equate independent study with self-directed learning. They propose the following definition:

> Independent study, broadly conceived, is a way of learning in which the student focuses attention on a specific organizing idea or a body of knowledge and masters it at his own rate of understanding. The wholesale use of independent study is a means through which teachers can satisfy the individual learning needs of students. It places emphasis on self-regulation and self-responsibility for learning. Beggs and Buffie (1969, p. x).

Their research findings yield some interesting data. Results from the University of Chicago Project indicated that students who were most capable sought out the most independent programs. They found also that

only about half the students felt comfortable with a
situation where they had freedom of choice, about
fifteen percent were violently against the idea and
about fifteen percent were tremendously enthusiastic.
There seemed to be no relationship between the amount
of class time students spent with a teacher and the
amount they learned. Students who reacted favourably
(about sixty percent) cited the following areas as
those in which they benefitted most: 'dimensions of
study habits, budgeting of time, finding the best and
appropriate materials and determining how one comes
to decisions about what one will do and what one has
to work hardest on.' Beggs & Buffie (1979, pp. 37,
38, 39).

Gruber in reporting on the research on self-
directed study found the results less determinate than
Beggs & Buffie. He reports that 'when the criterion
for evaluating self-directed study is the learning of
student subject matter the results are indeterminate.'
However, 'when the criterion for evaluation of self-
directed study is a group of attitudinal changes such
as increased curiosity, critical thinking, and atti-
tude towards independent intellectual work, brief
experiences with self-directed study do typically

produce small, favorable changes.' Gruber (1965,

p. 1)

An empirical study conducted by Arlin and Whitley measured how students' attitude was affected by their perceptions of academic locus of control. A group of students were assessed on their perception of opportunities for self-management of instruction and their perception of academic locus of control. Tests were administered at the beginning and ending of the school year. The results suggested that those students who perceived the classroom as a place where they were responsible for at least part of their learning were more likely to accept responsibility for both their success and failures. Arlin & Whitley (1978, pp. 988 - 992).

A recent study by Rick Raible of North Vancouver was conducted to see whether students could direct their own learning in a writing course while achieving a measure of acceptable competency in course objectives. Findings from the study indicated that students were able to make a successful transition from teacher-directed to student-directed learning while maintaining a satisfactory or better than satisfactory

level of competence in their writing. It was also
found that students experienced a significant im-
provement in their feelings about writing and about
their perception that they were self-directed.
Raible (1981).

Although the empirical evidence supporting the
inclusion of self-directed learning in the school is
meagre compared to other areas of educational research
there is compelling evidence that the concepts of self-
directed learning are essential for living and learn-
ing in the findings and philosophical views of such
eminent writers as Piaget and the humanistic psycholo-
gists such as Rogers and Maslow. Empirical studies at
least give some positive evidence that; there is merit
in involving students in decision making processes;
authoritarian methods do not enhance original thinking;
open mindedness leads to more complex problem solving;
learning style plays an important role in learning
effectiveness; independent study can assist self-
directed learning particularly in the area of attitu-
dinal changes; classrooms where students perceive them-
selves as responsible for their own learning are more
likely to accept responsibility for success or failure.

5. IS SELF-DIRECTED LEARNING APPROPRIATE AND

POSSIBLE FOR THE PRIMARY CHILD?

Supporters of self-directed learning suggest that

education be recognized as a process of maturation

through which each individual develops the capacity to

direct and control his learning and living -- maturity

of the student being dependent upon the student's

level of self-sufficiency. As the student perceives

himself as having the ability to effectively manage

his own learning he is able to take on increased

responsibility. Combs & Snygg (1959, p. 313), Faure

(1972, p. 81), Gibbons (1980, p. 42). Knowles ex-

plains that self-directed learning is in tune with our

natural processes of psychological development because

we develop from totally dependent to increasingly in-

dependent individuals. He writes that:

> An essential aspect of maturing is
> developing the ability to take in-
> creasing responsibility for our own
> lives -- to become increasingly self-
> directing. Knowles (1975, p. 15).

Every learner, therefore, is headed toward matu-

rity and self-direction. And although students may

not be mature in a total sense in any given situation,

they are capable of exercising self-direction in
relation to their level of development. Della Dora
claims that:

> ...young people are capable of begin-
> ning to learn to participate in sig-
> nificant ways in educational decision
> making in the elementary school. By
> the time they are entering early ado-
> lescence, most young people are capa-
> ble of participating in major ways in
> determining educational goals, subject
> matter for learning/teaching and ways
> of assessing educational achievement.
> Della Dora (1979, p. 1).

What is important according to numerous writers
is the recognition that the child can only learn what
is appropriate for his developmental stage. Heintz
(1975, p. 36), Knowles (1975, p. 21), Stephens (1974,
p. 19). According to Combs recognition of maturation
or readiness is crucial because:

> Many of our perceptions are based
> upon long series of previous discrim-
> inations extending back to our earli-
> est beginnings. (Therefore) It
> seems axiomatic that to make differ-
> entiations a person must have lived
> long enough to do so, a fact...which
> teachers recognize in the concept of
> readiness or maturation. Combs (1959,
> p. 82).

Malehorn in his book Open to Change writes that

'no child is too young to play an important role in directing his own education.' Malehorn (1978, p. 23). He gives the following reasons for his belief:

1. Young children are most impressionable; attitudes and habits learned in the early school years last the longest and affect the child most profoundly.

2. When a child's participation in his own educational decision making is delayed, he learns that his wants and opinions are not useful; he learns not to display initiative, but to wait for the teacher to direct him.

3. The young child generally offers a refreshing eagerness and a natural motivation to learn.

4. The young child has not been conditioned against exploring his world; he is less afraid to try something new; and he is not likely to view himself as a failure.

5. Given adequate directions he can be entrusted to choose an activity or a set of materials for his own investigation, operate simple machines and even evaluate his own progress.
Malehorn (1978, pp. 22, 23).

In order to promote self-direction in young children Gibbons and Phillips call for initiative training during the elementary school years. They feel that it

is 'important for children to have the opportunity to
explore and discover, but that after a reasonable
time, the child must decide and act.' Students are
encouraged through group discussion to deliberate and
weigh alternatives and their possible results. As
part of the initiative training students make use of
a support group to discuss individual proposals and
are also encouraged to design proposals for group
activities among themselves before approaching the
teacher. Products produced as new skills develop are
displayed at a learning fair where students are given
the opportunity to demonstrate what they have learned.
Gibbons & Phillips (1980, p. 22). Thatcher makes a
plea for self-directed learning at all levels of devel-
opment. He writes that:

> Self-directed learning is a strategy
> for teaching useful in kindergarten
> and in graduate school, successful
> with rich kids and poor kids, black
> and white, bright and dull. Most
> important of all, it is neither so
> esoteric nor so bound to the charisma
> of a rare teacher that it is beyond
> the competence of the average teacher,
> either novice or seasoned professional.
> Thatcher (1973, p. vi).

6. WHAT PRINCIPLES OF SELF-EDUCATION DOES THE
RESEARCH PROVIDE?

Several outstanding contributions to the literature in the form of principles about self-education have been written by Gibbons and Phillips and Huget.

Gibbons and Phillips have transformed their analysis from A Study of Experts Without Formal Training into fourteen principles.

1. In self-education the locus of control is in the self-educator whereas in formal education the locus of control is in institutions, their representatives, or their prescriptions. Teaching for self-education involves helping students to internalize control over their own learning.

2. Self-education is usually a concentrated effort in one field rather than a general study of many. Teaching for self-education involves helping students to identify and become expert at the activity or activities that may become central in their lives.

3. Self-education is usually applied education - learning for immediate application to a task, and from the practical experience involved in executing it. Teaching for self-education involves integrating theoretical studies with technical training and practical application. It means learning for specific use now rather than learning for possible use years later.

4. Self-educators are self-motivated, that is, they are committed to achievement in the field of their choice, even when faced with difficulties. Teaching for self-education involves helping students to generate their own drive toward their own goals rather than stimulating them to pursue goals set for them by others.

5.   Self-education is usually guided by a vision of accomplishment, recognition or rewards valued highly by the individual. Teaching for self-education involves helping students to see themselves successfully experiencing very desirable attainments. It involves learning to plan an effective way of making that vision a reality.

6.   Self-educators tend to settle on the particular field in which their interests, talents, past experiences, and opportunities are combined. Teaching for self-education involves patterns of exploration which enable students to try out a wide range of fields of activity.

7.   Self-educators tend to settle on the unique pattern of formal, informal and casual methods by which they learn best - drawing from such possibilities as study, observation, experience, courses, training, conversation, practice, trial and error, apprenticeship, productive activity, group interaction, events, and projects. Teaching involves helping each student to develop a personal learning style.

8.   Self-education involves the development of attributes traditionally associated with people of character: integrity, self-discipline, perseverance, industriousness, altruism, sensitivity to others, and strong guiding principles. Teaching for self-education should promote, model, and reward the development of personal integrity rather than the opportunistic pursuit of offered rewards, of self-discipline rather than obedience, of inner drive rather than the avoidance of punishment or the pursuit of artificial rewards, of caring rather than sustained competition and of strong internalized principles rather than externally imposed rules.

9. Self-education involves the development of attributes usually associated with self-directed and unique, even radical, people: drive, independence of thought, nonconformity, originality, and talent. Teaching for self-education involves promoting drive rather than passivity, independence rather than dependence, originality rather than conformity, and the talents that make individuals unique rather than the tasks that make them all act the same.

10. Self-educators use reading and other process skills to gain access to the information and guidance they need for their projects. Teaching for self-education involves training in the process skills, such as reading and remembering, especially at the moment students urgently need to gain access to information.

11. Self-education emerges as a theme that runs through a number of important experiences in the person's youth; later experiences maintain and develop the theme until it becomes a conscious focus of choices in the person's life. Teaching for self-education involves helping students to identify themes emerging in their lives, to build on those they choose, and to create new themes they desire.

12. Self-education is best cultivated in a warm, supportive, coherent environment in which people generally are active and there is a close relationship with at lease one other person. Teaching for self-education involves creating an active environment in which a student's self-directed activities are warmly supported and there are many opportunities to form close working relationships.

13. Self-educated people seem to like others and to be liked or admired by them;

they seem to be healthy in attitude,
body, and mind. Teaching for self-edu-
cation involves promoting a holistic ap-
proach to learning so that students not
only master some knowledge or skill, but
they also develop a healthy attitude toward
themselves, others, the world and their
activities.

14. In addition to cultivating expertise,
the characteristics described above out-
line a process of education suitable for
the development of a mature personality,
for achieving self-actualization and for
the process of learning. Teaching for
self-education involves helping each
student to become an expert, a participant,
and a person.
Gibbons & Phillips (1980, pp. 53 - 55)

These principles form the basis for program develop-

ment by the self-education study team at Simon Fraser

University.

Huget in her thesis, Self-Education: Principles

and Practices of Volitional Learning, has identified

thirty principles from a review of a large body of

literature on self-education. Underlying the princi-

ples is a general argument concerning the need for

self-education in relation to key sociological, per-

sonal, educational and psychological conditions.

Sociological Conditions

1. CHANGE: Rapid, continuous change in
complex contemporary environments requires
that individuals develop capacities to be
self-directing and self-responsible

throughout their lives.

2. FUTURITY: The development of individual competence in self-education is the keystone to meeting the future needs of society and civilization.

3. PRESSURE: Individuals require the capacity to be self-directing in order to cope effectively with external pressures imposed by the remote powers of government, big business, the media, and formal education.

4. FRAGMENTATION: An integrative educational approach designed to develop individual capacities for lifelong learning within the holistic context of a learning society must replace existing fragmented educational efforts in order that individuals will be prepared to meet the challenges of the modern world.

Educational Conditions

5. ISOLATION: The realities of the modern world demand that education cease its isolationist existence and form a dynamic and integrated system with society within which individual capacities for lifelong learning are developed.

6. BUREAUPATHOLOGY: In order to be effective educational entities in the future, the bureaupathology of existing school systems must be replaced with a flexible and adaptive educational technology designed to develop individual self-educative capacities.

7. SUBJECT EMPHASIS: In order to respond effectively, efficiently and humanely to the changing demands of the modern world, educational technology must place less emphasis on subject matter and focus instead on the development of individual self-enquiry skills.

8. COERCION: Individuals would live better,
learn more and grow more able to cope with
the world if education abandoned coercive
means of shaping human behavior and instead
helped individuals learn to shape themselves.

9. INDOCTRINATION: Effective self-educative
capacities liberate individuals from the
obligation to shape personal educational
expectations according to the services
offered by formal educational institutions.

10. INVOLVEMENT: Learning is essentially
active; school systems must start to involve
learners in their personal educative pro-
cesses so that students will come to depend
less on the classroom teacher and more on
the teacher inside themselves.

11. PEDAGOGICAL DOGMA: Self-directed
learning transcends the rigid didactic role
of traditional teacher-directed education
to change students from objects into sub-
jects of a self-managed, creative educa-
tional process.

12. TEACHER RESOURCES: Teaching for self-
education constitutes a challenging new
professional role which maximizes the utili-
zation of teacher resources through the trans-
ference of ownership and responsibility for
learning to the student.

13. NON-TRADITIONAL LEARNING APPROACHES:
To maximize the learning potential of non-
traditional learning approaches, individuals
must develop specialized self-directed
enquiry skills.

14. SELF-CULTURE: Self-education is widely
practiced by individuals in the course of
their everyday living as well as at the
highest levels of professional activity.

15. RESEARCH FINDINGS - CHARACTERISTICS:
Studies of people who have become successful

through self-education reveal a number of shared characteristics which provide valuable clues for educators regarding the skills and personal attributes required for successful self-direction in learning.

16. RESEARCH FINDINGS - METHODS: Studies of people who have become successful through self-education document a variety of unique learning methods employed by these individuals which have significant practical relevance to formal educational practice.

17. EDUCATION DESIGN: Studies concerned with the nature of self-educators and the learning methods they employ present significant guidelines for education designed to prepare individuals for lifelong self-education.

18. EDUCATIONAL VISION: Teacher-directed and student-directed education are not mutually exclusive concepts; these forms of education belong on the same continuum, placed according to the degree of structure prescribed in the learning situation.

Psychological Conditions

19. DEVELOPMENTAL CONTINUUM: The primary program of each individual's self-education is the successful resolution of the personal, relational and performative tasks which must be addressed in the lifelong developmental process of unfolding mastery; the secondary program is the creation of a personal pattern of evolutionary transformations through which the individual transcends his environment to fulfill his visions, potentialities and enterprises.

20. READINESS FOR SELF-DIRECTION: Self-therapy is a self-educational process employed in a wide range of psychological treatments designed to help individuals develop the mastery of inner forces

necessary for self-management, psychological health and the capacity to function effectively in the world.

21. IDENTITY: Self-education provides opportunities for development, exploration, expression and exercise of personal characteristics and capabilities toward the formulation of a strong and positive self concept.

22. SEEKING OF MEANING: Self-education supports, enhances and encourages the human psychological dynamic of natural and spontaneous seeking of meaning.

Personal Conditions

23. INDIVIDUAL NEEDS: Self-education provides for diversity of individual educational opportunities to match unique personal learning patterns, styles and needs.

24. MASTERY: Self-education permits individual pursuit of understanding, achievement and excellence in a broad range of fields.

25. SELF-HEALTH: Self-education is holistic education concerned with the development of healthy, fully functioning individuals in whom the physical, intellectual, emotional and ethical aspects of their lives are successfully integrated.

26. TIME: In order to maximize the learning potential of the days, months and years spent outside formal schooling, individuals must become skillfully self-directing.

27. INTERPERSONAL COMPETENCE: Self-education is characterized by interdependence and cultivates individual competence in interpersonal living.

28. CHOICE: Self-education cultivates in individuals the decision-making skills required to successfully direct personal growth and achievement.

29. VOLITION: Self-education develops in individuals the folitional capacity to reach beyond the known and familiar in personal pursuit of new knowledge, skills, relationships and accomplishments.

30. FREEDOM: The volitional nature of self-education establishes each individual as personal creator and master of himself and of his immediate environment.
Huget (1982, pp. 192 - 198)

Summary of the Literature Review

The purpose of this review has been to clarify
the meaning of self-directed learning and to extrapo-
late those principles and ideas which support its
inclusion in the elementary classroom.

It was found that there are two important princi-
ples underlying the concept. First, that learning
takes place inside the learner as an active, not
passive part of the process. The learner consequently
becomes the centre of his own learning. Second, that
if we accept as the broad aim for education the neces-
sity to develop the "whole child", physically, intel-
lectually, emotionally and ethically, then all can be-
come self-directed learners. Self-directed learning is
described in the literature variously as a volitional,
holistic, lifelong learning process by which students
can learn through guided intervention to become auton-
omous learners.

There is evidence in the literature that the
selection of content in any successful self-directed
learning program should be based upon the needs and
wishes of the learner, that the teacher act as a
facilitator of learning and that the climate of the

classroom should necessarily be supportive.

Evidence of numerous investigations revealed also that self-directed learners are characterized by certain traits and behaviors. The self-directed individual it was found is a person with a positive view of self, who pursues his potentialities, who is creative in attitude, who is responsive and responsible in his relationships with others and who takes major responsibility for the purposes and methods of his own learning.

Support for self-directed learning began with the overturning of traditional beliefs which favoured external control. Piaget and Dewey were instrumental in laying the foundations of reform which characterized the theoretical outcry of the "humanists" like Rogers, Maslow, May, From, Combs, Erickson and Glaser whose emphasis was on student control over the learning environment. Ongoing programs such as the Eight Year Study and Community Based programs described by Della Dora lent further substance to the idea that self-directed learning experiences merited further investigation. Empirical support was evidenced in the studies of Torrance, Adorno, Rokeach, Dunn & Dunn,

Beggs & Buffie, Arlin & Whitely, and Raible. These studies give positive evidence that there is merit in involving students in decision making processes, that authoritarian methods do not enhance original thinking, that learning style plays an important role in learning effectiveness; and that independent study results in positive attitudinal changes toward self-directed learning. Students in classrooms where they perceive themselves as responsible for their own learning are more likely to accept responsibility for their own failures and successes.

Although there is evidence in the literature to support the inclusion of self-directed learning programs in the primary classroom no reference is made to actual programs established specifically for primary children. Furthermore, there is lack of empirical evidence to support their inclusion or efficacy. The following questions, therefore, require careful consideration:

1. What is self-directed learning for the primary child?

2. What do the elements of self-directed learning look like in terms of the young child?

3. What capacity for self-direction does the
   primary age child have? Can he, in fact,
   master the skills needed for self-
   directed learning?

4. Self-direction has so many different
   levels. At what level of self-direction
   is the primary child?

5. Can the primary child manage himself,
   that is, can he make decisions about
   multiple choices, organization of ideas
   and materials as well as time?

6. Does the primary child have adequate
   social maturity to design and implement
   appropriate projects without direction?

7. What is the best way for the primary
   child to achieve successful self-
   direction?

8. What should be the teacher's role in
   a primary self-directed learning
   situation?

The conclusions drawn from the analysis of the
literature suggest that self-directed learning clearly
exists and it may even be widely practiced. The con-
cept of self-directed learning has many significant

practical applications for formal schooling. The
teaching of lifelong skills preparing individuals to
cope effectively with the demands of the modern world
cannot be lightly dismissed. Teaching for self-
education suggests an alternative form of education
that clearly offers new roles for students and teachers.
The challenge lies in creating new models with appro-
priate learning approaches based on individual levels
of self-education competence.

Chapter 3

THE PROGRAM

THEORETICAL FRAMEWORK FOR THE STUDY

The investigations of Dr. Maurice Gibbons and Dr.
Gary Phillips in their series of booklets on Self-Edu-
cation and Challenge Education provide the framework
for the field development program used for this study.
Their writings provide a self-directed learning model.
They also provide a delivery system for the model in
the form of the Negotiated Learning Contract. This
learning contract, specifically designed to facilitate
self-directed learning, has been adapted to meet the
developmental and learning requirements of primary
school children.

In their writings on self-directed learning,
Gibbons and Phillips support Knowles' description of
self-directed learning 'as a process in which individ-
uals take the initiative, with or without the help of
others, in diagnosing their learning needs, formulating
learning goals, identifying human and material resources
for learning, choosing and implementing appropriate
learning strategies and evaluating learning outcomes.'
Knowles, p. 18.   Self-education is further described as

a lifelong process which generally takes place outside
of formal educational institutions because the nature
of self-education is such that it can only occur when
individuals choose what to learn and when to learn it.

The institutional framework then constitutes a
place where self-education skills can be taught and
practiced. According to Gibbons and Phillips, however,
this can only occur if major changes are made in tradi-
tional schooling.

The writers identify ten major areas of difference.
In self-education control over decisions about learning
and responsibility for achievement lies with the individ-
ual not the teacher. Instead of relying on the teacher
the self-directed learner initiates his own activities
and motivation. The self-educated learner also chooses
what to learn and how to learn and evaluates his own per-
formance. He, furthermore, sets his own goals and man-
ages his own resources and time. His learning is process
instead of content oriented. The emphasis is on active
exploration of knowledge rather than passive accumula-
tion of fact from print. Content for the self-directed
learner is based on his needs, interests and aspirations
instead of mastering the various disciplines of knowledge.

Dependency on the demands and services of the school are minimized for the self-directed learner. He is encouraged to make independent decisions yet work and learn effectively as a group member. The self-directed learner focuses on becoming expert in a single area at a time, while the traditional learner pursues many subjects within a given time frame and endeavours to become minimally competent in all of them. Traditionally the evaluation process is in the hands of the school administration and the student is compared to a standard which determines his success or failure. Self-directed learners evaluate themselves in comparison with their own earlier performance. Success or failure is measured by the amount of growth they have achieved. Gibbons & Phillips (1980, p. 5).

The rather obvious conclusion that can be drawn here is that traditional educational practices are inappropriate for preparing students for a lifetime of self-directed learning. The question then is, how can the educator encourage students to develop the desire, skill and initiative to pursue learning without external compulsion? Gibbons and Phillips suggest that there

are three major transitions which must be accomplished before a self-directed educational program can be realized. First, the transition from teacher-directed to student-directed learning; second, the transition from student-directed learning to guided self-education; and third, the transition from guided self-education to the independent pursuit of excellence. Gibbons & Phillips (1980, p. 11). The writers suggest that the best way to accomplish this transition, from teacher-directed to self-directed learning, is to establish a system where the teacher-directed portion of the program is gradually reduced as the student increases in maturity, experience and self-directedness thus enabling him to make the transition from school to continued self-education.

A number of guidelines, therefore, have been proposed for the development of programs to teach for self-directed learning. The first guideline proposes that people are more likely to pursue self-directed learning if they are taught how to formulate a realistic VISION of excellence; more enduring patterns of self-directed learning will develop if they are based on a uniquely personal learning STYLE; preparation for self-directed learning involves PRACTICE, planning, implementing,

managing and evaluating their own programs; the pro-
gram must be designed so that each student is able to
achieve EXPERTNESS in some chosen area; effective pro-
grams provide a diminishing SUPERSTRUCTURE within which
the learner can make his own decisions, and design his
own programs; public DEMONSTRATION of accomplishments
help people to pursue self-directed learning with
greater determination; high impact TEACHING methods
lead to a transfer of ownership and responsibility for
learning from the teacher to the student; directing
one's own learning requires INTERACTION with others in
order to gain information and form working relation-
ships with others; in order to experience growth and
change the self-directed learner must set for himself
strategic RISK EXPERIENCES; the last guideline proposes
that self-directed learning should go beyond immediate
utilitarian goals in order to pursue SELF CULTURE or
the achievement of excellence as a person. Gibbons &
Phillips (1980, pp. 11-19).

When proposing programs for self-directed learning
Gibbons and Phillips have attempted to extend the guide-
lines for teaching into programs for parents, elementary
school teachers, secondary and university teachers and

for adults of all ages. The program development coincides with the psychological and physiological development of the individual.

The first stage, termed INFLUENTIAL PARENTHOOD describes a program where parents create an environment that encourages self-initiated learning through play and where parents model initiative, independence and self-directed learning activities. Parents are encouraged to form Influential Parenthood Groups so that ideas, materials and problems can be shared. In the INITIATIVE TRAINING stage the child progresses from informal learning through play to learning through planned activities in the elementary school. As he progresses the child is given greater responsibility for making decisions. He begins with projects related to school subjects and personal interests and learns to conduct both individual and group learning projects. By the end of his elementary school years he is prepared to participate in a public Learning Fair in order to demonstrate what he has learned.. Upon reaching the secondary level or a university level the student embarks on the CHALLENGE EDUCATION PROGRAM. At this stage the student may be challenged in school subject

areas of challenge areas such as adventure, artistic expression, logical inquiry, academic concentration, practical applications or service. Whichever program he follows the student plans, manages and evaluates his own progress. Upon completion of his challenge activity he demonstrates his level of excellence. At this time he is also evaluated by his peers, teachers and himself.

Beyond schooling the writers suggest a system of SELF-EDUCATION SERVICES, comprised of community and business resources and facilities, trained self-education consultants and opportunities for people to experience and try working on something new in the hope that people will voluntarily pursue excellence for the rest of their lives in both their pursuit of knowledge and in the quality of their daily lives. Gibbons & Phillips (1980, pp. 20-23).

Theory, however, is useless unless it is transposed into practice. For this purpose Gibbons and Phillips have designed the negotiated learning contract which enables the student to effect the transfer from teacher-direction to self-direction. It is a vehicle which provides the student with a systematic plan for

attaining his goal yet provides necessary support as a model of shared accountability. The contract is a ten step plan of action based on the notion of shared negotiation by the student and his learning committee usually composed of the teacher, the student, the parent or parent substitute. In the first step the student describes a VISION or picture of himself partaking in an experience which he would like to be engaged in successfully. He then sets a GOAL or a clear indication of exactly what skill is to be achieved. It is important that the goal is important rather than safe and trivial otherwise the learner will be disappointed later on. A LEARNING PLAN is then drawn up. Students are urged to pursue their goal in a way that is both unique and meaningful to them. This plan is the preparation for the selection of a CHALLENGE which is a restatement of the goal in the most challenging way possible. The writers feel that it is the ability of the student to challenge himself which is at the heart of self-direction. The student is then asked to ANTICIPATE PROBLEMS and DEVELOP SOLUTIONS. This is a preventative measure enabling both the student and his learning committee to prevent failure and to provide

for a sense of accountability which helps the student keep on task. The student further lists the events which are contained in his learning plan in the order in which they will happen and is helped to CREATE A TIMETABLE which is both realistic yet compels him to work steadily. In order to determine how success will be MEASURED the student is asked to establish a baseline from which future performance can be measured. His evaluation at the end of the program is a judgement on how far he has progressed beyond the starting point. The student sets a minimum level of improvement which he will accept as well as a maximum level of excellence he will strive towards. The DEMONSTRATION step is an important part of the program. It appropriately demonstrates completion of the program by focussing on the effort and commitment which has gone into the effort. It is concrete evidence of his accomplishments. A final CELEBRATION of the student's achievement gives it importance and emphasis. It acts as a further motivation to continue with his self-education. Gibbons, Norman & Phillips (1980, pp. 4-8).

During implementation of the negotiated learning contract the teacher accomplishes the following impor-

tant tasks: securing the commitment of the partici-
pants; ensuring that the contract is negotiated and
signed; guiding students through the transition to
self-directed learning; establishing and maintaining
a steady pattern of progress; ensuring that the stu-
dent's accomplishment is demonstrated and celebrated.
Gibbons, Norman & Phillips (1980, p. 9). Figure 1 on
the following page is an example of the negotiated
learning contract.

These teacher tasks appear initially to be fairly
attainable. However, students who have spent signifi-
cant time being directed by both parents and teacher,
experience what is described by Gibbons and Phillips
'as a profound trauma as they attempt to take over the
responsibilities for directing their own learning'.
Gibbons & Phillips (Dec. 1978, pp. 296-300). The task
of changing from teacher-directed to self-directed then
becomes a challenge to survive. Students realize they
are incapable of fulfilling their original goal, man-
agement of time and resources becomes difficult , if
not impossible, directing themselves becomes an
agonizing experience and they resign themselves to
failure. This crisis period according to the writers

THE NEGOTIATED LEARNING CONTRACT   Student: _____

(SUMMARY)

    Parent: _____

    Teacher: _____

---

1. Vision: The picture in the student's mind of the way they would most like to be different as a person in one year from now.

2. Goal: The specific achievement students want to make within a given time -- an achievement that moves them closer to their vision.

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3. Learning Plan: An outline of methods, activities, strategies, people, and resources students can use to guarantee the attainment

6. Timetable: A list of specific dates and tasks from the learning plan that will be completed by that time.

7. Baseline Measure: An observable indication of how students perform now in the goal-area of activity.

4. Challenge: The most rigorous test of new skills that they think they can manage.

8. Minimum: The smallest improvement they and the planning committee will accept.

Satisfactory: An average acceptable level of improvement

Excellence: Evidence of great improvement; expertness.

5. Anticipated Problems: A list of things that can go wrong -- obstacles, resistant people, personal short-comings and so on.

9. Proof: Demonstration that will prove to themselves and to others that they successfully met their challenge and achieved their goal.

Preventions: Strategies the student and the committee can employ to avoid or resolve these anticipated difficulties.

10. Celebration: The most pleasurable and appropriate way of enjoying and sharing their achievement.

FIGURE 1

SELF-DIRECTED CHALLENGE UNIT PLAN

is an inevitable but necessary step toward independent
learning. At this point the teacher helps the student
to confront his problems with a view to a better under-
standing of his own potential as a self-directed indi-
vidual. At this point the teacher may renegotiate the
contract, devise a more realistic plan of action, and
provide opportunities which will lead to early success.
The student, however, must never be rescued. He must
solve his own problems and reaffirm his own ability to
be responsible for his own learning. The teacher's
role then is often to counsel, to negotiate, to re-
direct planning efforts, and to share in the students'
successes and failures. The teacher is, in fact, an
integral member of the learning team and as such is
responsible for helping students through the stages
leading to self-direction.

According to Gibbons and Phillips the stages
leading to self-directedness follow a predictable
stage sequence. The following description outlines
the critical stages which the writers feel students
generally experience in the transition from teacher-
directed to self-directed learning. Also included are
those strategies suggested for teacher use at each

predictable phase:

DECISION. The student makes the decision
to enter into the program. The teacher
helps the student understand the meaning
of self-directed learning. Students learn
characteristics of self-directed learners
and visualize themselves in that role.

INITIAL ECSTACY. Students exhibit high
degree of optimism over the freedom and
options which the program offers. Inex-
perience often results in choice of activi-
ties which are too easy or too challenging.
The teacher teaches the contracting process:
goal setting, time management, resource
identification, and utilization of their
learning style. Students begin contract
negotiations.

SHOCK OF RECOGNITION. Students overwhelmed
by quantity of work to be done, they experi-
ence the shock of responsibility that goes
with freedom. Teacher often renegotiates
a more realistic learning contract and rein-
forces any signs of success. Group support
is initiated here.

CRISIS. Students are immobilized by the
complexity of their undertaking. A sense
of failure often leads to guilt feelings
or overt hostility towards the program and
teacher. Teacher allows student time to
reflect on difficulties and solutions. His
attitude is positive in order to maximize
success. Individual or group assessment or
problem solving is recommended here.

REALISM. Students accept failure and work
out strategies to ensure success. They are
now ready to proceed. Teacher provides
opportunities for sharing successes and
minimizing failures. Student selects
attainable activities, goals, etc.

COMMITMENT. Students become purposeful
and self-disciplined. Teacher secures
wirtten commitment, conducts conferences,
and guides students toward self-evaluation.
Students reach beyond the security of the
classroom when selecting and working on
activities.

ACHIEVEMENT. Students report and enjoy
success. Teacher increases student re-
sponsibility for reporting and evaluating.
Students are introduced to the concept of
in-depth mastery in one area.

PLATEAU. Students tend to repeat previ-
ously successful experiences rather than
taking on new challenges. Teacher refuses
to accept comfortable challenges. Students
are exposed to and asked to perform at
higher levels.

MOBILIZATION. Students become product and
begin the pursuit of excellence. Teacher
relinquishes more control and meets stu-
dents more as equals. Students conduct
extensive and intensive challenges and
prepare to present and celebrate their
accomplishments. Gibbons & Phillips
(1980, pp. 14-22).

According to Gibbons and Phillips, however, the

successful implementation of the teacher strategies

outlined above depend upon several other basic compo-

nents of the program. First, it is essential to create

a positive environment where respect for individuals

and freedom and independence are highly valued and

where self-direction is admired and modelled. Second,

the teacher-directed structure must be replaced by a

self-directed superstructure where freedom and respon-
sibility are gradually increased with each successive
task. Third, students must be taught the process
skills necessary for self-directed learning. This
includes skills in managing time effectively, organ-
izing and locating resources, diagnosing their own
learning needs and styles, setting goals, formulating
a plan of action, evaluating their own progress and
learning effective negotiation and group problem solv-
ing skills. Gibbons & Phillips (1980, pp. 23-25).
Gibbons also suggests that students require the support
of peers, parents, counsellors, and community as well
as the teacher in order to become successful self-
directed individuals. Encouragement, expert guidance
and models are commodities which the inexperienced
learner groping towards self-direction can use in
abundance.

THE PROGRAM - FINNY AND FINELLA: A SELF-DIRECTED

LEARNING ACTIVITY

The preceding framework described in this chapter
indicates that self-directed learning is very different
from teacher-directed learning. The difference lies
not only in the program itself, which is process rather
than content oriented, but also in the conceptual devel-
opment of the student into a positive, responsible,
self-directing individual. Equally important is the
reversal of the teacher role from directional to facil-
itative and the creation of an environment in which
students feel free to experiment, explore and take
risks which enable them to extend themselves to their
fullest capacities.

I   THE STUDENT MANUAL

The program designed for this study was written
in two parts, the student manual and a teacher's guide.
The student manual is essentially a process instrument
designed to lead the learner through the steps involved
in self-directed learning. Each step represents a skill
which is presented so that the learner is able to trans-
late it into an experience or concrete action. The
steps are arranged so that the learner systematically
encounters and uses the skills necessary to become self-

directed. In this way the student not only learns the skills but literally becomes part of the self-directed process in action.

a) The Contract Steps

The student manual is, in fact, a self-directed learning contract. The process is similar to that of the negotiated learning contract but it has been changed and adapted to meet the developmental needs of primary age children. The contract is an eight step process:

1. Choosing a topic

2. Identifying a goal

3. Choosing a product

4. Finding and organizing resources

5. Planning learning activities

6. Organizing time

7. Evaluating progress

8. Demonstrating achievement

1. Choosing a topic

Young children have many and varied interests. The topic chosen should be relevant and narrow. The topic must be important to them or they will quickly lose

interest in the project. The success of the program is based upon their sustained interest in the topic.

2. Identifying a goal

The goal states what the child wants to learn or do with his topic. The child can visualize what he will get done by the end of the project. The goal must be reasonable, not too difficult or too easy and it must be clear and specific. This is often the key to the success of his project.

3. Choosing a product

The product is the thing the student will produce or the task he will accomplish. The product should help the child learn about his chosen topic. It should be something challenging, something he has never done before and it should be exciting for him.

4. Finding and organizing resources

Becoming aware of and utilizing various resources both human and inanimate is an important step towards becoming self-directed. Even at the primary level children should be encouraged to use peers, parents,

teachers, experts and the community as resources. A most useful tool for the self-directed learner is to know where and whom to go to for expert knowledge and advice.

5. Planning learning activities

The activities are the things the student will do to learn about his topic and how he will do those things. Each child is unique. One may learn by asking, another by experimenting and yet another by reading. Children learn in many different ways and should be encouraged to use the style best suited to their needs and way of learning.

6. Organizing time

This occurs when the student selects the activities from his list and arranges them in the order in which they should be done. The young student has great difficulty and may need a great deal of help and encouragement to adhere to his time line. Time lines should be as realistic as possible. This step may have to be renegotiated and, therefore, should be kept as realistic as possible at the outset.

7. Evaluating progress

The most important evaluation of the project is the student's. There should be no comparison to anyone else. It is important even for the young child to plan ahead the way in which he will evaluate his project. The young student is very conscious of how well he did, whether it was his best or his poorest effort. Questions that help the young child with evaluation might be: Did you get finished what you set out to do? How well do you think you did? How much did you learn compared with what you knew before?

8. Demonstrating achievement

A demonstration to others of what he has learned shows the student and others that he has met his goal. This commits him to complete his project. The student must decide how he will present his project, where and to whom. For young students this presentation is often undertaken with great pride and viewed as a celebration in itself.

Figure 2 is an example of the contract as it appears in the student manual.

Now it's time to make a final overall project plan.

Print your plan in the box below.

My Project Plan

Name:

Topic:

Goal:

Product:

Things I will do	Materials I will need

Time it will take to do my project:_____

How I will share my project:

How I will evaluate my project:

Now it's time to work on your project.

Good Luck _____!

ASK

READ

VISIT

FIGURE 2

FINNY & FINELLA PRIMARY SELF-DIRECTED
LEARNING CONTRACT

b)   Manual Format and Design

When designing the manual consideration was given to the visual impact the materials would have on a young child. It was felt that the appeal of the materials themselves would be a large factor in the success of the program. A survey of primary children in the school revealed that most of the children preferred animal stories with an added touch of humour. These findings, therefore, were incorporated into the materials.

The children are introduced to the program by two cartooned members of the fish family, Finny and Finella. These characters provide the name for the program. Finny and Finella guide the students through the eight-step self-directed learning process by speaking directly to the student in cartoon bubbles. They instruct, question and provide models for the children to follow. A monkey and a parrot are also included in order to provide variety.

Each child is provided with a manual which becomes uniquely his. Because young children respond emotionally to seeing their own names displayed, spaces have been provided on pages 3, 5, 7, 10, 14, 19, 21 and 22 for the teacher to insert the child's name before he

begins the program. This is illustrated in Figure 3.

Another consideration was the physical development of the young child. Therefore, illustrations are provided wherever possible to visually assist the child who has reading difficulties. The size of the print is large so that the instructions and information can be easily understood, and key words are boxed or underlined to attract the reader's attention. A special marker   is used whenever the child is required to do an activity and space is provided in the manual for the child's responses. Lists are used extensively throughout the manual for two reasons. First, many primary children have difficulty writing down extended thoughts. They become frustrated and discouraged and might well abandon a project because of this. Second, lists are used to encourage the use of brainstorming techniques. Spaces are provided for children to add their own ideas or simply to place a check beside an idea they prefer from the list. The program aims to encourage rather than discourage those who do not have fluent writing or brainstorming skills. It was decided also that the reading level of the materials should not exceed grade three. However, vocabulary for the first draft was not as carefully controlled as it should have

You have probably already guessed that Finny and Finella belong to the fish family. And as you know that most fish live in "schools" they must be very smart.
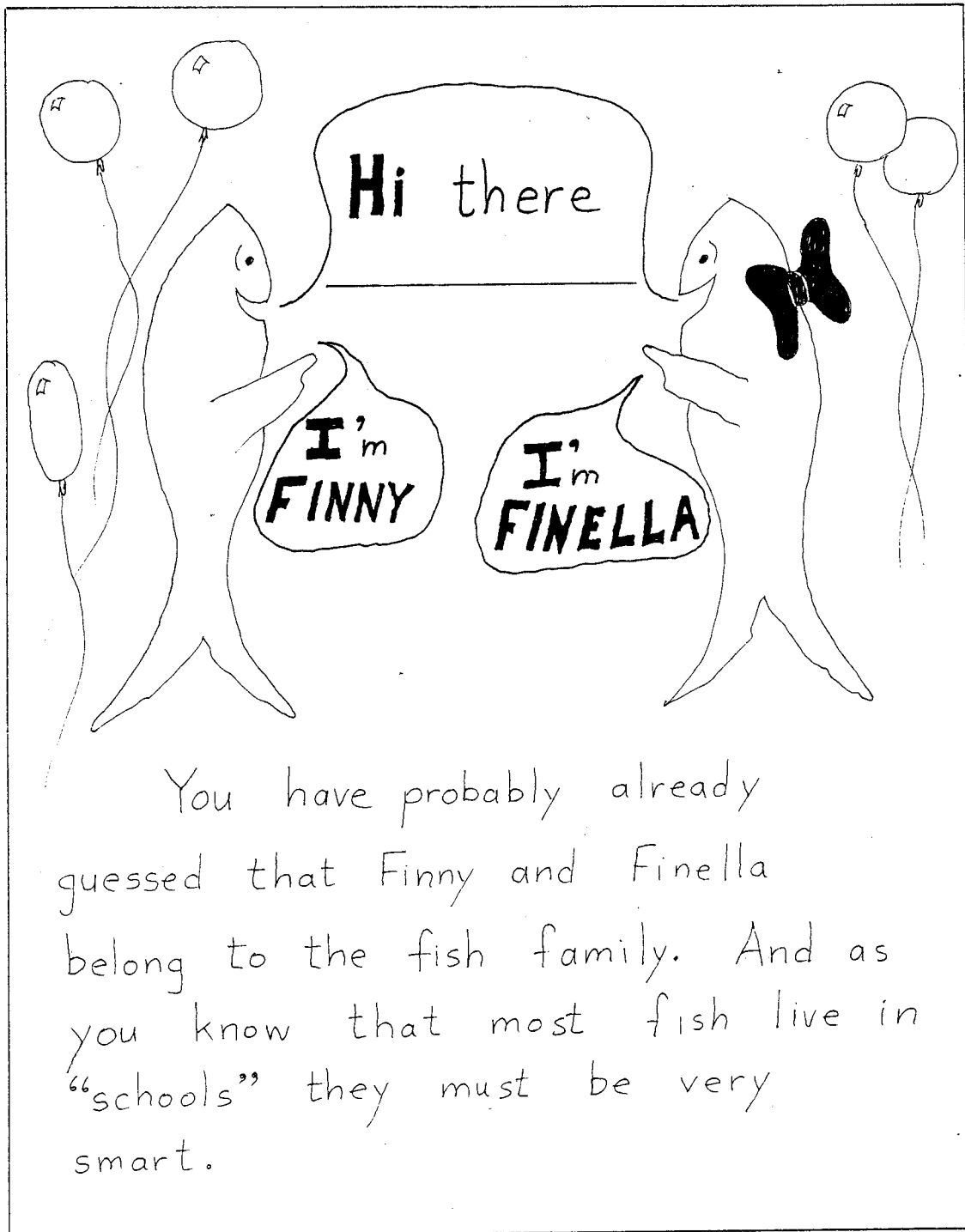
FIGURE 3

FINNY & FINELLA PRIMARY SELF-DIRECTED
LEARNING PROJECT SAMPLE PAGE 3

been. The second and third drafts, however, conformed

to the Ves Thomas Grade three vocabulary list. Thomas

(1979).

II THE TEACHER'S GUIDE

The Teacher's Guide serves two main purposes.

First, it gives the teacher a theoretical and practical

framework for the program. Second, it familiarizes the

teacher with the eight-step process designed to facili-

tate self-directed learning. It also contains numerous

readiness activities developed for each step of the pro-

gram. Figure 4 is a copy of the contents of the Teach-

er's Guide.

Part one of the guide begins by presenting the

teacher with various definitions of self-directed learn-

ing which relate directly to the program. These defini-

tions serve to underline the concepts and processes con-

tained in the program. A description of the components

of a self-directed learning program, a list of attitudes

necessary for successful self-directed learning and rea-

sons why one should teach for self-directed learning are

included. The success of the program, or indeed, any

self-directed learning program is dependent to a great

TABLE OF CONTENTS

FIGURE 4

TEACHER'S GUIDE TABLE OF CONTENTS

extent on the role played by the teacher, his attitude towards children and learning and the learning environment he creates. The guide describes the teacher as a facilitator of learning and outlines the various responsibilities and tasks of the teacher in a self-directed learning situation. The responsibility of the teacher is to establish a positive learning environment. This section, therefore, includes a list of goals and numerous suggested activities.

Because readiness appears to be a factor in all areas of learning, it was felt that in the area of self-directedness readiness should also be considered. A readiness test based on student attitude, therefore, is included in the guide to help teachers, along with their professional observations and judgments, to determine the child's readiness to work independently. Conferences play a large part in the success of the program: first, to secure a commitment from the child after his contract has been negotiated; and second, to support and help the child through the self-directed learning crisis. This time of crisis when the child has lost his initial enthusiasm and begins to balk at the work and responsibility involved in directing his own learning is explained as one of a series of stages

through which students proceed in order to become self-directed. The guide also suggests ways in which teachers can anticipate and be prepared for this event.

Included in the guide also is a section dealing with student versus teacher expectation of finished products. A problem in expectation occurs when young children produce products that may not seem adequate from an adult point of view. It is suggested that projects should only be evaluated in terms of student progress from the time the project was started until its completion. The guide points out that emphasis should be on the student's satisfaction with his product and the amount of progress he has made rather than on a comparison with others. The last item in part one deals with several ways in which the self-directed learning program can be incorporated into the school curriculum.

Part two of the Teacher's Guide deals with practical ways for helping students become self-directed. Before children use the program it is vital that many of the skills required for self-directed learning be taught. Included in the guide are many practical activities for teaching children the skills necessary for choosing topics, setting goals, developing a plan

of action, locating appropriate resources, estimating

time, sharing completed products and evaluating their

own work. At the end of the guide are a series of

suggestions for mini self-directed projects. The

guide provides a sensible way to approach self-directed

learning in that it endeavors to ensure that children

are adequately prepared by providing them with the nec-

essary skills and varied mini-project experiences.

Chapter 4

RESEARCH DESIGN AND METHODOLOGY

The purpose of the study was to develop and field
test a set of materials which would teach primary chil-
dren those process skills necessary for self-directed
learning. A descriptive field developmental research
design was used for this study. The rest of this chap-
ter is devoted to a description of the methods and pro-
cedures employed in the study.

THE SUBJECTS

The sample for this study consisted of fifty stu-
dents ranging in age from 7 to 9 years. The distribu-
tion by grade was as follows: grade 2, 15 students;
grade 3, 27 students; grade 4, 8 students. Selection
of the groups was random. However, the composition of
the student sample within these groups was outside the
author's control. The groups regardless of grade or
ability level were used in the experiment in the order
they were scheduled to come to the enrichment centre.
Since children at various ability levels from above
average to below average were scheduled for enrichment
classes, the selection of students for the sample was
determined by the classroom teachers. However, the

author checked with the teachers of the various groups in order to determine the distribution of the student's achievement levels. Language Arts achievement was used as the best indicator as the skills in that subject area were considered most closely related to the skills employed by the self-directed learner. Achievement was noted as above average, average and below average. This distribution was derived from the recorded results of the Canadian Test of Basic Skills, the Gates McGinitie Reading test, and the Ginn 120 placement test. These tests were administered to all students in the school at the beginning of the school year. The distribution of the fifty students involved in the study was as follows: 16 above average; 27 average; 7 below average. It was the opinion of the author and the four primary teachers in the school that the distribution was, in fact, indicative of the general distribution of achievement in the school. Subjects from the other school involved were selected randomly with no reference to ability or interest in the program. Two other teachers in the district had agreed to participate in the project. However, one teacher was given an additional assignment during the year and, therefore, asked to be released and another teacher found that school and classroom pressures were

such that the added responsibility of participating in
the study would be too great for her. The author felt
that it was both desirable and necessary to get feed-
back from several other teachers in order to give
greater validity to the research. It was unfortunate,
therefore, that this was not possible.

LOCATION OF THE STUDY

Two schools were involved in the study. Seymour
Heights School, 2640 Carnation Street, North Vancouver,
and Braemar School, 2600 Mahon Street, also of North
Vancouver, British Columbia. Seymour Heights School
was chosen because it was the school where the author
taught and Braemar School was chosen because a teacher,
Mrs. Joan Varley, of that school agreed to participate
in the experiment.

RESEARCH DESIGN

It was decided that a Descriptive Field Develop-
ment Research Design would be most suitable insofar as
the study needed a structure which would provide for
intervention and modification of a model under field
testing conditions. A field development model, intro-
duced by Gibbons was chosen for the study as it allowed
for a series of systemic changes conducted in the field

as operational weaknesses in the program became more evident.

Field Development Cycle

```
                    Evaluation
                 ↗  Intervention
                /   Pattern          ↘    ↗ Application ↘
                                                          ↘
Model ──→    Field Adaption              Formative    Formative
                                         Evaluation   Evaluation
                ↑                            ↑                  /
                 ↘     Refined          ↖   Modified  ↙
                       Model       ←         Practice
```
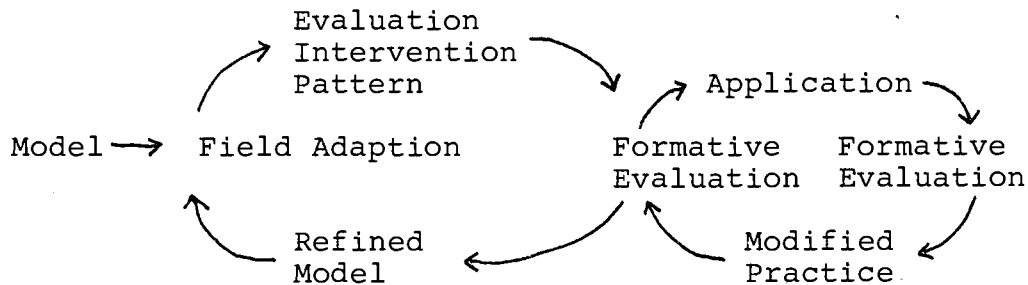
Gibbons (1970, p. 37)

The Primary Self-Directed Learning Activity went through on-site evaluation using the Field Development Cycle shown in the figure above. Modifications were made to the program during implementation stages. As each group went through the implementation cycle on-site evaluation and modifications were made in order to produce the most effective program possible. It was possible also using the model to conduct more formal studies to gain summative information concerning students' reactions to the program as well as their growth in self-directedness as a result of using the program.

METHODS - PROCEDURES

Prior to beginning the program, but not within the three-week time frame, all students were given three days of formal instruction in the skills they would be required to use during the course of the program. All students then completed an attitudinal survey of their perceived level of self-directedness as well as a sentence completion test indicating their present awareness and use of self-directed learning skills. The same tests were administered at the conclusion of the program. Before beginning the program students were asked to develop a list of criteria for self evaluation. These criteria were used by individual students at the end of the program to evaluate their projects. Each participant was then given a student manual "Finny and Finella: A Self-Directed Learning Activity" which contained the eight-step process leading to the completion of a contract. Upon completion of an initial contract the student negotiated with the teacher until a final contract, acceptable to both teacher and student, could be agreed upon. Students then spent the time indicated on their individually planned work schedules working toward completion of their projects. Completed projects were shared and self-evaluated. Students were then

given post-tests using the aforementioned instruments.
Each student also responded to a recorded interview
which was later used for program evaluation. On the
last day of the three-week session children were given
a one-hour task which necessitated practical demonstra-
tion of the skills taught in the program. The results
were used to ascertain whether or not a transfer of
learning had been accomplished. Two groups of students
not involved in the study were also given the same task.
The results were then compared with those of the stu-
dents who had participated in the study.

METHODS OF DATA COLLECTION

Methods of evaluation used in the study were both
formative and summative. FORMATIVE techniques were
used to indicate when program modifications were re-
quired. Techniques used were: student-teacher confer-
ences, observations recorded in a daily journal, check
lists to monitor performance and specify student diffi-
culties with the materials, and recorded student inter-
views which helped to evaluate strengths and weaknesses
of the program. SUMMATIVE evaluation was used to meas-
ure those changes which had occurred in skills and atti-
tude during the three-week period. Instruments used

were: a survey of attitude, measuring the students'

perceptions of their own level of self-direction, a

sentence-completion survey indicating present compe-

tence in self-directed learning skills, and a task

incorporating all the skills taught in the program

which would indicate whether transferability had been

achieved. A description of the various techniques

used for evaluation during the study follows:

1. Formative Evaluation

    a) Student-Teacher Conferences

Meetings with students were not scheduled on a

regular basis. Students were required to meet with

the teacher after initial completion of the contract

in order to determine its acceptability to both stu-

dent and teacher. Other meetings were held as request-

ed and determined by the needs of the student. The

purpose of the meetings was to assist the student in

planning and solving problems related to the program.

The conferences also provided information leading to

program refinement.

    b) Teacher Observation

A daily record in the form of a diary was kept to

record student difficulties with the program. In order

that the recorded information could be more easily
collated and interpreted, the following behaviors were
identified as specifically related to self-directed-
ness: seeks help when needed; uses a variety of
resources; completes plan and project on time; works
well without supervision. Informal observations were
noted and recorded daily. These observations were
tabled at the end of the program to indicate the per-
centage of students whose behavior had met the above
criteria.

    c)   Interview

Upon completion of the program each student was
interviewed in order to determine his general reaction
to the program. The information was used to assess
the perceived success of the refined model in order
that further changes could be made to the program.

    d)   Check Lists

Check lists were used to monitor student perform-
ance and behavior. The check list provided information
concerning student difficulties with vocabulary, for-
mat or concepts. This provided specific information
for program refinement. Attitudes of self-directedness
most commonly exhibited during the course of each ses-
sion were also noted on the check list. These were:

independence, confidence, risk taking, determination, pride in self-direction, realistic expectations and exhibiting a drive towards completion. These notations were later checked to ascertain whether or not a shift in attitude was evident towards self-directedness as a result of the program.

2. Summative Evaluation

   a) Survey of Attitudes Towards Self-Directed
       Learning

The survey of attitudes was used to measure perceived levels of self-directedness. (See Figure 5). It was administered as a pre and post-survey. The purpose of the survey was to determine the degree to which a student viewed himself as being self-directed. A survey of this kind was not available, therefore, the author had to develop her own. Reference was made, however, to Torrance's Self-Directed Learning Readiness Skills survey which deals mainly with attitudes towards self-directedness. Torrance (1978, p. 183). See Figure 6 for the Torrance test and an example of the results derived from that study. The survey used in this study contains twenty-six items describing various attitudes characteristic of self-directed learners. A three-

FINNY & FINELLA

PRIMARY SELF-DIRECTED LEARNING PROJECT

SURVEY OF ATTITUDES

NAME: _____   BIRTHDATE: _____

GRADE: _____   AGE: _____

TEACHER: _____   DATE: _____

SCHOOL: _____

Write the answer that shows most clearly how you feel.
(yes, no, sometimes)

1. I like working by myself.   _____

2. I like to share my finished work only with
    my teacher.   _____

3. I have trouble thinking of good ideas for
    my project.   _____

4. I am afraid of making mistakes in my work.   _____

5. I feel good when I have finished a project
    all by myself.   _____

6. I like to do projects where I don't have to
    write very much.   _____

7. I like to work with a group better than by
    myself.   _____

8. I leave my work until the last minute and
    then I can't get it done.   _____

9. I like getting information from many people
    and places.   _____

10. I like to share my finished work with a group._____

11. I ask for help when I don't understand
    something.   _____

12. It's easy for me to plan my own project.   _____

                                                           2

FIGURE 5

SURVEY OF ATTITUDES   Page 2   NAME: _____

13. I do a poor job when I do a project.   _____

14. I am afraid the teacher will say I did
     something wrong.   _____

15. I need more time to finish my projects.   _____

16. I like to choose my own topic for my project. _____

17. I like getting all my information from one
     place.   _____

18. I like to plan my own projects.   _____

19. I am afraid to share my finished work.   _____

20. Doing my own projects is a lot of fun.   _____

21. I like to do a lot of writing in a project.   _____

22. I am afraid when the teacher tells me I
     have to do a project all by myself.   _____

23. I like it best when the teacher teaches
     me rather than doing it by myself.   _____

24. I like to do short projects only.   _____

25. I would like to do more projects if I had
     more time.   _____

26. My projects turn out as well as I think
     they will.   _____

FIGURE 5 (continued)

Table 1

Self-Directed Learning Readiness Skills of
Gifted Students at the Elementary, Middle
School, and Senior High School Levels

Readiness Skill	Percentages		
	Elementary (N=876)	Middle (N=650)	Senior (N=203)
I love to learn new things (Agree)	90	92	96
I like for my teacher to tell me exactly what to do at all times (Disagree)	52	74	82
The people I admire most are always learning new things (Agree)	38	45	61
I don't work very well on my own (Disagree)	78	87	94
I can't work very well on a team solving problems (Disagree)	67	75	74
I try to relate what I'm learning to my future goals (Agree)	67	71	81
I have a lot of curiosity about things (Agree)	88	90	95
I am good at thinking of unusual ways to do things (Agree)	67	62	65
If there is something I want to find out, I can figure a way to do it (Agree)	71	79	72
I don't like dealing with problems where there are no certain answers (Disagree)	51	51	65

FIGURE 6

scale response mode was used: yes, no, sometimes. Responses from the survey were scored and analysed using a Matched Group t-Test to determine any significant change in student perceptions about their own self-directedness.

b) Sentence Completion Survey

The purpose of the sentence completion survey was to measure the student's level of competency in self-directed learning skills in a pre and post-test situation. Each of the sentences relates to a process skill taught in the program. Correctness of the responses was judged on the basis of a concrete example given by the student or an accurate description of the process. Results were tabulated to assess what percentage of statements were correctly completed. A comparison was then made of the percentage differences which occurred between the correctly completed responses on the pre and post-tests.

c) Task For Evaluating Self-Directed Learning

In order to assess transferability of the skills taught by the program, a one-hour task was devised which would enable children to demonstrate the skills learned as a result of having completed the program. The task itself contains four evaluative components:

* pre-interview at which the child was asked to
  describe how he felt about the project, what his
  project was about, what he intended to achieve,
  how he intended to do it and what he expected to
  produce.

* observation -- all purposeful activity was record-
  ed on an observation sheet. Observations were
  recorded at least three times during the one-hour
  task period.

* evaluation -- the success of the task was judged
  by the degree and quality of completion.

* post-interview -- the student was asked to res-
  pond to questions which indicated whether he
  accomplished what he set out to do, how he felt
  about being involved in the task, was he satis-
  fied with what he had accomplished, and what he
  would do differently if he were asked to com-
  plete a task again.

Task response data were arranged according to de-
gree of task completion: complete, almost all, more
than half, about half, less than half. Consideration
was also given to responses in the pre and post-inter-
views to determine the attitude the child exhibited

towards the task. Task responses were then arranged according to positive, somewhat positive and negative responses. A high degree of transferability was considered achieved if the student was able to answer the interview questions without difficulty, if the observations noted had indicated that he was on task and exhibited characteristics of self-directedness, if he completed what he set out to complete and if he felt positive about the experience in the post-interview situation.

This chapter has outlined those measuring procedures considered necessary for the implementation of a set of materials designed to teach primary children how to direct their own learning. A developmental research design was used to implement a model which consisted of a student manual teaching the process skills necessary for self-directed learning. For purposes of evaluating and refining the materials, a field-development model was chosen which allowed for periodic intervention and assessment of the materials so that refinements could be effected. Formal and informal methods of evaluation were also employed. Formal procedures were used to measure student attitude towards self-directedness and skill development. Informal measures were used to indi-

cate the degree of self-directedness students displayed throughout the program. The results of these evaluation procedures are reported in Chapter 6 of this report. Emphasis throughout the project was on informal procedures appropriate to field development research. Combined with the summative aspect of the study some evidence to support self-directed learning was achieved.

A survey of the literature and current research indicated that to date very little work had been done, particularly in the area of self-directed learning as related to the primary child. Due to the newness of the field, therefore, and the unavailability of standardized instruments, evaluation measures which seemed most reasonable and appropriate for the situation were developed.

Chapter 5

A NARRATIVE REPORT ON THE FIELDWORK

The purpose of the narrative report is to describe the Primary Self-Directed Learning Project in action. The report is divided into three parts: a narrative report on the program in action specifically outlining the changes made to the materials as each group went through the three-week field development cycle; a number of case studies outlining various projects completed by the students as well as their responses and reactions to the program; a section on views and concerns as perceived by the teacher. The information for this section was recorded as notes and as diary entries during the implementation cycle.

NARRATIVE REPORT - REFINEMENT OF THE PROGRAM

The program went through six implementation cycles. Changes which allowed for progressive refinement of the materials were made upon completion of each cycle. Although minor changes were effected whenever the need occurred, major changes were made only to the first and second drafts of the materials. Copies of the original program and the two subsequent revisions have been included in the Appendix.

The following aspects of the program will be dis-
cussed at each stage of development: student difficul-
ties with the materials and subsequent refinements;
general impressions of the group's progress; and stu-
dent attitudes toward self-directedness.

Implementation Cycle 1

The participants in the first implementation cycle
were eight grade 4 students ranging in age from eight to
nine years. Since it was near the beginning of the
school year and because grade 4 students represent the
upper continuum of the primary grades it was felt that
their inclusion was appropriate. This group used the
initial draft of the program which consisted of three
sections: a readiness booklet; a booklet in which the
students helped Finny and Finella complete a program;
and a third booklet in which students completed a pro-
gram on their own. The students progressed through the
materials with only minor difficulties. Major concepts
were readily understood and except for one student, pro-
jects were successfully completed. Comments by the stu-
dents indicated, however, that the program was too long
and repetitive. It was also found that the readiness
skills included in the first section were useful but not

essential to the program. It was decided, therefore, that the readiness section of the materials would be removed. This constituted the only major refinement effected during this implementation cycle.

Implementation Cycle 2

These seven students were entering their second year at school. Initial difficulties occurred when they completed the attitude and sentence completion achievement surveys. They experienced great frustration because of their difficulty expressing themselves in written form. One student in particular began the survey printing very neatly. As she progressed her printing became larger and increasingly more erratic until it was large and illegible. Her frustration and anger were tangibly evident in her responses. Other students simply stopped answering the questions. It was decided, therefore, that a parent volunteer would record the student's responses for the post-tests. Recording responses became standard procedure for subsequent groups.

It was evident as the students began the program that the vacabulary had not been as carefully controlled as it should have been. Children had difficulty with

words such as 'illustrate' and 'resources'. The program was also too long and required a great deal of writing. Differentiation between 'learning activities' and 'product activities' caused endless problems. A number of changes were, therefore, effected. A new program was drafted, consisting of one booklet which incorporated all of the eight steps in the original program. Vocabulary was strictly controlled with adherence to the Ves Thomas grade three word list. The terms 'learning and product activities' were exchanged for 'Things I will do'. Spaces where extensive brainstorming and writing were required were changed to ready-made lists where the child could indicate his preference for an idea by the placement of a check or star.

Despite the difficulties the group generally remained positive. Four children, however, experienced crisis situations which resulted in overt hostility and non-productiveness. After several conferences and problem solving sessions, these students again became productive. All but two of the seven students completed their projects extremely successfully. Two outstanding projects from this group have been described in the case study section of this chapter.

Implementation Cycle 3

These eight grade 3 students encountered very few
difficulties with the materials. However, it was ob-
served that the predetermined answers in the form of
lists were inhibiting. Children were passively accept-
ing someone else's ideas instead of being challenged to
think for themselves. It was decided that shortened
forms of the lists would be retained in order to help
children get started but that spaces would be provided
so that children could add their own ideas. It was also
noted that although methods for self-evaluation had been
discussed at the beginning of the session, children were
not clear about evaluation procedures at the end of the
program because decisions about evaluation had not been
recorded. The contract was therefore enlarged to in-
clude "Way in which I will evaluate my project'. Having
deleted the section on product activities it was found
that children were not planning for the materials re-
quired to complete their projects and were consequently
often ill-prepared. A section headed 'Materials I will
need' was, therefore, added to the planning section of
the program. Because of the various changes the pages
of the booklet were reorganized to provide a more logi-
cal sequence of learning experiences. The refinements

to the materials during this cycle constituted the last major changes to the materials.

Although the majority of the students in the group were able to function independently when aided by conferences and problem solving sessions, one very bright student in particular was incapable of directing his own learning. He constantly required feedback as to his choices, or the quality of his work. He was unable to make decisions concerning a topic or product. The crisis period for this child was acute. He finally abandoned the project and insisted he could do better in his classroom.

Implementation Cycles 4, 5 & 6

Except for very minor changes the program underwent no further refinement. Groups involved in these latter cycles responded favourably to the level of vocabulary, format and organization of the materials. Although few changes were made observation of the groups provided some interesting data.

Group 4

These eight grade 2 students began very enthusiastically. However, enthusiasm turned to frustration and unhappiness when half the members of the group chose

the same topic and product. Enthusiasm also changed
to panic when the students realized how much work was
involved in the projects of their choosing. The crisis
stage for this entire group was acute. The boys par-
ticularly turned to socializing as a way of coping with
the crisis. The girls either became totally apathetic
or sat and coloured the pictures in the program booklet.
After many conferences, counselling and group discussions
the students finally became resigned and then productive.
One student in particular changed dramatically from a
socializing wanderer to a totally absorbed, productive
student. He became so task oriented that it was diffi-
cult to pursuade him to leave at the end of each session.
He did not again revert to his former behavior. Two
students in the group undertook projects for which they
lacked the required skills. One student decided to cre-
ate a clay model of a horse. After repeated attempts
she was still unable to attach the legs so that they re-
mained fixed. She totally rejected any suggestion that
she might seek help. After four unsuccessful sessions,
she finally asked for guidance and help. Her happiness
at having succeeded was evident when she shared her pro-
ject with great pride. Despite the initial frustrations
and subsequent crisis difficulties all members of the

group completed their projects successfully.

Group 5

These nine grade 3 students had difficulty setting goals and choosing products. Their choices were either too easy or too difficult. Half the group were reluctant to take on anything that appeared at all challenging. Much time was spent in conferences in order to negotiate acceptable contracts. One child became very hostile when she realized that she was expected to complete her project on her own. She expressed 'hatred' for the program, the teacher and the resource centre. Although she finally completed her project she did not satisfactorily come to terms with her dislike of the program. This group of children gave many indications that they would rather have the teacher tell them what do do. The problem was not lack of ability but rather lack of self-directedness. However, two students in the group, who had a history of poor work habits and general disinterest in school, performed superbly and exhibited a great deal of interest and initiative. All but two of the students completed their projects.

Group 6

Ten grade 3 students from Braemar School were,

according to the teacher, very dependent on teacher direction. She felt that the timing near the end of the school year contributed to some of the frustration exhibited by this group. The resource centre was closed early in June and the students felt that this really limited their choices. As was found with most groups, the students were initially very enthusiastic about the idea of freedom. They were not used to limitless choices and, therefore, had difficulty choosing a topic. Eight students found they couldn't cope with planning their own time. Panic set in when they found time was running out and the projects weren't complete. Presentations generally were poorly planned. Self-evaluation, however, was very honest. Four felt they had done poorly but would like to try again because they felt confident that they could do better the next time.

The teacher of this group made several recommendations. She felt that much more time should have been spent on readiness activities and mini-projects. She also felt that the contract should be signed to ensure greater commitment from the students. It was obvious from observing the group that the brightest were not necessarily the most self-directed. In one instance exactly the reverse was true. The student, generally

most successful in a teacher-directed environment, was
least productive when asked to direct his own learning.
The teacher felt that the program was very useful in
that it outlined clearly the steps necessary for self-
direction. She was concerned that the survey results
did not reflect the worth of the program because chil-
dren who were initially very enthusiastic about free-
dom realized that being responsible for their own learn-
ing was much harder work than they had anticipated.
Many, therefore, responded positively on the pre-survey
and negatively on the post-survey. She felt that these
results did not reflect negatively on the program but
rather made a comment on the comfort and dependency
that teacher-directed learning encourages.

CASE STUDIES

Because of the descriptive nature of this study
it seemed appropriate to explore in further detail stu-
dent responses to the program, both in terms of their
choice of products and their reactions to the process
which was designed to help them achieve greater self-
direction.

The children in the case studies were chosen because
their reactions represented a wide range of responses to
the program.

LARS: (Grade 2)

Lars' goal was to construct a hockey rink complete with players in their correct positions. For the first week Lars wandered and socialized. During the second week he was taken to a live hockey game. His lethargic and disinterested attitude was completely reversed. His absorption with the project became so complete that he became immune to noise or distractions and had to be reminded and even prodded to leave the resource centre. Even having wasted so much time he proudly presented his project to his other grade two classmates on the day it was due.

JENNIFER: (Grade 2)

Jennifer decided to make a calendar. She carefully planned her cat theme and drew the pictures to correspond with the seasons. However, when she began the dates for each month she hadn't considered the variations of days, dates, etc. which occur on a calendar. Her frustration became so great she decided on several occasions to abandon the project. After a lot of encouragement she found a beautifully photographed cat calendar. She carefully studied the days and the dates and successfully completed her project.

NICOLE: (Grade 3)

In her classroom Nicole responded extremely well to teacher-directed activities, however, when confronted with tasks which required self-direction she had great difficulty. Being interested in horses, she decided to do her project on that topic. She required constant guidance and reinforcement before making any decision concerning her project. Her plan included making a clay horse's head, which she had difficulty mounting. When she was encouraged to solve the problem of mounting the horse's head she became extremely hostile. She insisted that she 'hated' the program, she 'hated' the horse, in fact, she was very unhappy. Several peers came to her rescue offering advice and ideas. Although Nicole completed her project she remained unhappy about having to take responsibility for her own learning.

ELANA: (Grade 2)

Elana decided to write and produce a short play. After completing her plan and contract she immediately began writing her play. She took it home that evening and not only completed the play, constructed the props but also contacted the people who were to participate in it. The script included parts for the teachers and

students. The play was successfully performed for the group as well as several other classes in the school. She provided a very fine example of leadership and creativity in action.

NATASHA: (Grade 3)

Natasha decided to conduct a study using live rabbits. Although she had planned carefully she hadn't considered the difficulties of working with highly excitable animals. Major problems arose when the weighing equipment did not have a container large enough to hold the rabbit and the weights were inadequate. She obtained help and support from peers and the custodial staff. She recorded her findings in a small bound book complete with diagrams and written data. She very proudly presented her project to her teacher and class.

MIKE: (Grade 3)

Interest in the resource centre computer is always high. Mike decided to learn how to write a computer program. He went through a period of great anxiety when he realized that he would have to do the project entirely on his own. When he realized that a room full of computers had been installed in the school so that grade six and seven students could receive instruction

in computer programming he secured permission from the
instructor to attend the sessions. His problem, how-
ever, was in securing permission from his teacher.
Mike had not been completing assignments and he gener-
ally created a disturbance rather than working. His
teacher was reluctant to let him attend the computer
sessions. He was finally allowed to attend on the con-
dition that his assignments would be completed first.
Not only did Mike complete his assignments and shape-
up his behavior, he also completed a very fine computer
program which he presented to the rest of his grade
three class.

CHRIS: (Grade 3)

Chris was very enthusiastic but he had difficul-
ties right from the beginning. First, he couldn't
decide on a topic. He simply had too many interests.
Finally he decided to build a birdhouse. His plans
were complete but he kept forgetting his materials at
home. After wasting three sessions wandering and pro-
crastinating he finally renegotiated his contract. He
decided to construct the birdhouse out of cardboard
instead of wood. Once the decision had been made he
worked productively until his project was complete. He

narrowly completed the project within the allotted time, but he was very proud of his effort.

TEACHER OBSERVATIONS AND COMMENTS

During all of the implementation cycles the author kept a diary of daily observations. These entries yielded some interesting impressions which often led to more questions than answers. Some of those impressions will be described in this section. The need for readiness activities was evident throughout the entries. One of the obvious needs was for more instruction in the process skills. Because students lacked these skills they were often unable to set goals or plan activities proficiently. Their inexperience in using various resources was also evident. Young children quickly asked when they required information. However, their lack of interviewing skills and awareness of other sources of information limited not only their choice of projects but also their success. It became clear, therefore, that the activities in the guide book, especially those experiences relating to the completion of mini-projects should be an important consideration when initiating a self-directed learning program. Other readiness factors also became evident.

The students, it was found, had very little concept of
the idea of time. Time lines, therefore, were rarely
adhered to and often abandoned. Many students were
anxious to get the work done immediately. Others had
very little conception of the length of time an activity
would actually take. The lack of attitudinal readiness
was also apparent. The students were often inhibited
in their performance by a lack of self-confidence, the
lack of problem solving skills or the lack of initia-
tive. It was also interesting to note that all chil-
dren went through the stages described by Gibbons as
the self-education crisis. Student behaviors particu-
larly during the crisis phase ranged from mildly frus-
trated to extremely hostile. Because of awareness and
anticipation of this stage it was possible to redirect
most students back into productive channels. Some
children again experienced a crisis situation when they
were asked to complete a mini-task after completion of
the program. The reactions, however, were much milder.
Most students appeared to feel more confidence approach-
ing a self-directed task for the second time.

Products that children produced were varied and
interesting. However, it was noted that younger stu-
dents rarely chose to do written reports or even in-

clude written information in their projects. Yet they
were very capable of verbal explanation and presenta-
tion. It was evident also to both the teachers involved
in the study that intelligence and self-direction did
not necessarily preclude one another. Several of the
most capable students in the groups were least able to
cope with the freedom and responsibility demanded of
the self-directed learner.

The observations made during the study prompted
a number of interesting questions: What part does
maturity play in the self-directed learning process?
If students had the skills would they automatically be-
come self-directed? How does one determine readiness
for self-directed learning? Can all students become
self-directed learners? What part if any does intelli-
gence play in self-directedness?

The number of questions formulated as a result of
the observations indicates clearly that much more in-
formation is needed in order to understand the process
of self-directed learning and the role of the primary
student in that process.

Chapter 6

RESULTS, CONCLUSIONS AND RECOMMENDATIONS

INTRODUCTION

This chapter begins with a detailed account of the
findings for each of the data collecting instruments
used for this study. Following this, a summary of the
analysis and an account of related findings will be
given. A series of recommendations for further investi-
gations concludes this chapter.

Research for this study was undertaken in order to
determine whether or not the materials, Finny and Finella:
A Self-Directed Learning Activity, could, in fact, teach
primary students a process and those related skills which
would enable them to complete a self-directed learning
project on their own. A field development model which
allowed for intervention and on-site modification was
selected. Changes to the materials were made during and
after each cycle. The field development report in Chap-
ter 5 delineates those refinements which were made during
each implementation cycle. Observation and interview
data led to changes being made which related directly to
the developmental level of the students rather than
changes to the self-directed learning process itself.

Stricter vocabulary control, fewer demands for written responses, and the designing of a final product with fewer pages led to a program design more suited to primary students. Student ease with the modified materials was evident in check-list data and teacher recorded observations obtained during the final three implementation cycles. Few difficulties were noted and children appeared comfortable with the materials.

In addition to providing data leading to formative changes to the materials the implementation cycle also provided opportunities to obtain evidence of changes in the learner as a result of using the materials. The measures used for this purpose yielded some interesting results. These findings are described in the following section.

RESULTS

1. Observed Behavior of Students As Self-Directed Learners

Behavioral reactions were recorded in a daily journal in order to ascertain student response to the program and to ascertain the effect of the program on the behavior of the participants. Four attributes of the self-directed learner were identified. These were:

seeks help when needed; uses a variety of resources; completes plans and projects on time; works well without supervision. A daily entry was made comparing each student's behavior with this ideal. A three-response mode was used to ascertain the degree to which the student met the above criteria: A - exhibited all self-directed behaviors; S - exhibited at least half or more of the self-directed behaviors; F - exhibited few or none of the self-directed behaviors. An analysis of the results provided the following information: Out of the fifty participants in the program 22% demonstrated behavior which exhibited a high degree of responsibility in directing their own learning. These students completed their tasks without difficulty and responded positively to the program. 58% exhibited at least half of the listed behaviors and generally performed adequately with some help and encouragement from the teacher. 18% of the students had difficulty coping with all aspects of self-directedness. These students exhibited behaviors of frustration, unhappiness and disinterest. Much of their time was spent socializing or wandering aimlessly waiting for teacher-direction. See Table I.

TABLE I

INFORMAL OBSERVATION RECORDED DAILY IN DIARY
CATEGORIES OF SELF-DIRECTEDNESS

CATEGORY	PERCENTAGE OF STUDENTS

1. Generally met the following criteria for self-directedness throughout the program:
 	
  i) seeks help when needed
  ii) uses a variety of resources
  iii) completes plans and projects on time
  iv) works well without supervision
	22%

2. Exhibited at least half of the behaviors of self-directedness consistently.	58%
3. Exhibited few or none of the behaviors of self-directedness – showed little or no responsibility for their own learning.	18%

It would appear from these observations that a
significant number of children exhibited some or all of
the characteristics of the self-directed learner. These
figures, however, require cautious interpretation since
there was no available comparison to indicate whether or
not these students worked any less purposefully in the
teacher-directed classroom. Data for individual students

revealed that 18% of the subjects showed a definite

shift towards more self-directed behavior from the be-

ginning to the end of the study. This finding indicates

tentatively that at least some of the children may have

become more self-directed as a result of having partici-

pated in the program.

2. Analysis of Check Lists

In addition to providing specific information for

refining the materials discussed in Chapter 5, the Check

List was used to monitor student performance while par-

ticipating in the program. Students were observed twice

per session for on-task and off-task behavior. After the

entries had been tabulated the results were grouped into

three categories: on task 80% or more of the time; 50 -

80% of the time; and less than 50% of the time. It was

found that 40% of the students were on task 80% or more

of the time, 48% of the students were on task 50 - 80%

of the time, and 12% were on task less than 50% of the

time. See Table II. The high percentage of on-task

results seemed to indicate a high degree of comfort with

the materials. It also indicated a high degree of self-

directedness which, as stated previously, may or may not

have been a result of the program but rather of the gen-

eral self-directedness of the group whether in a teacher or self-directed situation.

TABLE II

STUDENT PERCENTAGE OF ON-TASK PERFORMANCE

	ON-TASK 80% or more of the time	ON-TASK 50 - 80% of the time	ON-TASK 50% or less of the time
Percentage of Students	40%	48%	12%

The information obtained from the Check lists was also graphed and analysed in order to assess any shifts in behavior within the groups. See Table III. It was noted that all groups showed a shift to greater on-task absorption toward the end of the program. It is possible that this shift was caused by the psychological pressure of working towards a set completion date. Other interesting patterns emerged which seemed to parallel Gibbons' stages of self-directedness. Gibbons (1980, pp. 8 - 12). Low points on the graphs indicated this phase quite clearly usually around the third to sixth day into the program. Although Group One did not noticeably exhibit behaviors of 'initial ecstacy', their behaviors exhibited a definite 'crisis' stage. See

TABLE III

STUDENT ON-TASK PERFORMANCE PROFILES
SHOWING SHIFTS IN BEHAVIOR
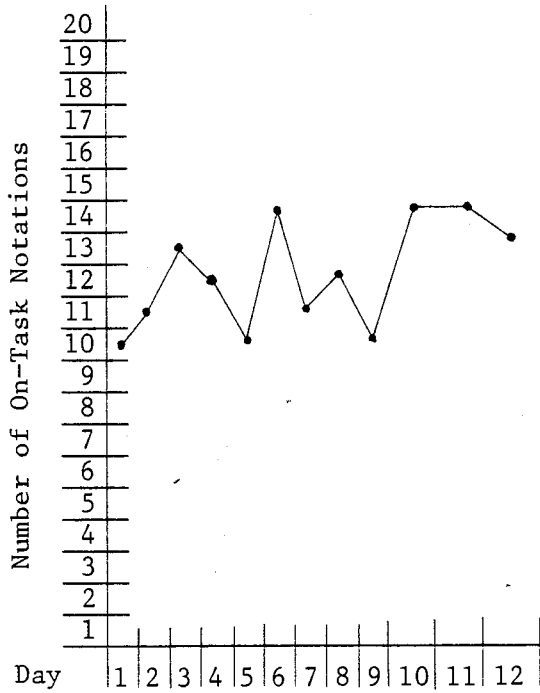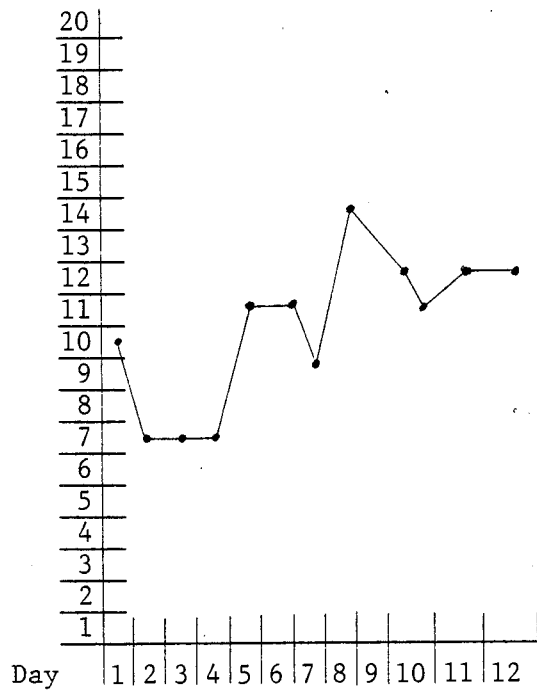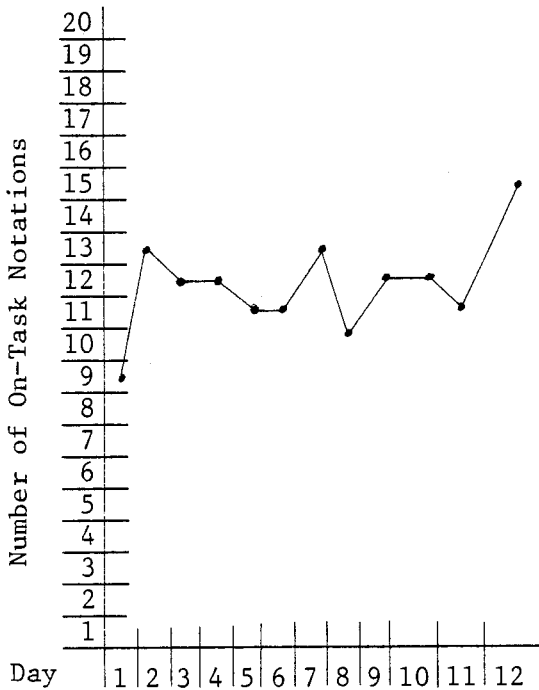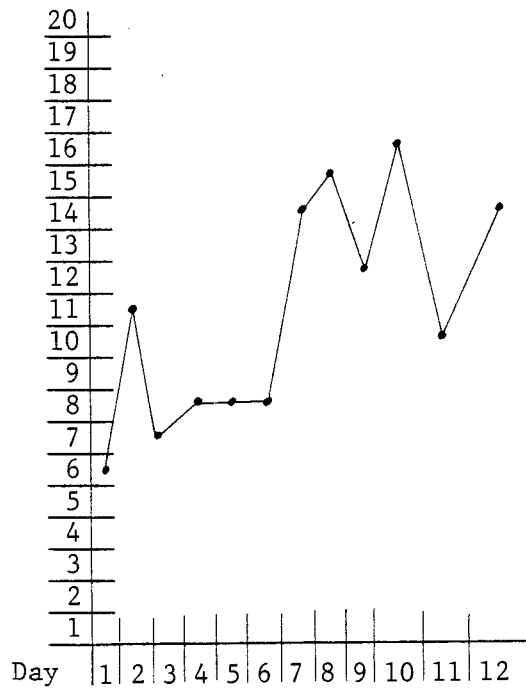
TABLE III (continued)

Group 5
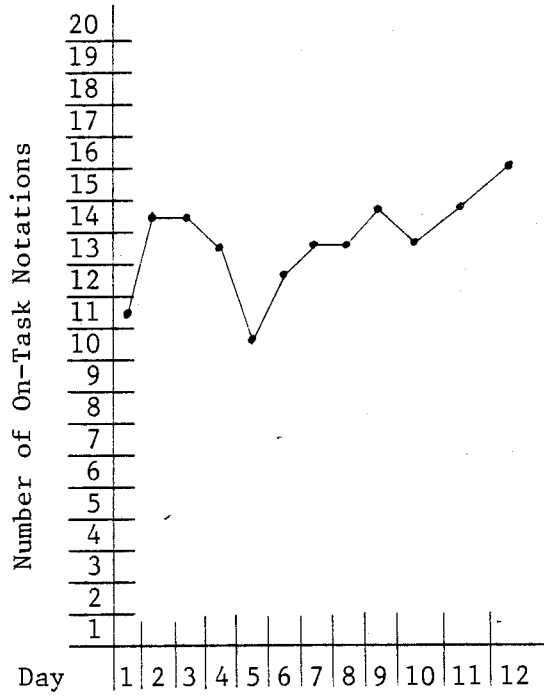
Group 6
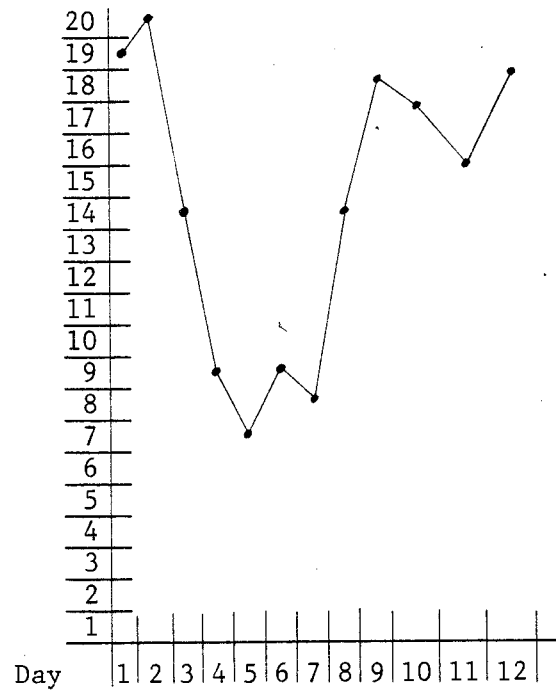
Table III. Group Two appeared to experience an initial ecstacy as well as a crisis phase before becoming productively engaged. Groups Three, Four and Five exhibited somewhat balanced patterns of behavior. Although these groups did not demonstrate behavioral extremes they exhibited somewhat apathetic initial reactions to the program. However, a crisis phase was evident in data from all three groups. Group Six exhibited the most extreme behaviors. Initially they were extremely ecstatic about the program but as they progressed they exhibited extreme crisis behaviors such as hostility or apathy. See page 132.

It seems possible to conclude that most students went through the self-education crisis to some degree. And although the majority of students in this study showed greater on-task performance towards the end of the study, this shift toward self-directedness is not conclusive insofar as students may have felt compelled to work more efficiently because of a time deadline.

3. Pre and Post-Sentence Completion Survey of Self-
    Directed Learning Skills

The purpose of this survey was to assess the students' facility in using the process skills taught in

the program. A high frequency of correct responses

was interpreted as an indication that students perceived

themselves as fairly proficient in the use of the pro-

cess skills and conversely a low frequency of correct

responses indicated perception of less proficiency.

Very little difference in response was found between pre

and post-test scores. The pre-test ellicited 51.5% cor-

rect responses and the post-test 56.2% correct responses

indicating the students' perceived self-directedness

(Chapter 4, page 121). See Table IV.

TABLE IV

SENTENCE COMPLETION SURVEY OF
SELF-DIRECTED LEARNING
SKILLS

	Correct Responses	
	N	%
Pre-test	232	51.5
Post-test	253	56.2

Increase = 4.7%

The results indicate only a minimal increase in skill

competency. The poor response may have been the result

of inadequate time set aside for teaching the readiness

skills outlined in the Teacher's Guide.

4. Pre and Post-Attitude Survey Towards Self-
   Directedness

The data from this survey represent the most posi-
tive results of the study. This survey was used to
determine the degree to which a student viewed himself
as being self-directed. The survey contained items
describing various attitudes characteristic of self-
directed learners. The pre and post-scores were
analysed using a Matched Group t-Test resulting in a
very significant level of difference at .001. The gain
of 3.29 represented about three-quarters of a standard
deviation. See Table V.

TABLE V

CORRELATED t-TEST OF PRE AND POST-TEST SCORES FOR
PRIMARY SELF-DIRECTED LEARNING ACTIVITY
SURVEY OF ATTITUDES

	Mean Values	Standard Deviation	t Value for D
Pre-test	12.7083	4.566	
Post-test	16.0000	4.704	
Difference	-3.2917	4.287	-5.32
Significant at .001 level			

The gain of 3.29 is about 3/4 of a standard deviation.

These results support the notion that there was a defi-
nite change in attitude towards self-directed learning
during the three-week project period. There was a sig-
nificant shift towards greater self-direction. This
shift in attitude cannot be attributed conclusively to
the program because of the absence of a control group.
However, since the only program teaching for self-
directed learning was administered to the students in-
volved in the study, there is a strong indication that
the program had some significant influence on students'
attitudes towards self-directedness. See Table V.

5. Task For Evaluating Self-Directed Learning

In order to try to determine whether or not trans-
ferability of the skills taught in the program had
occurred, a final task was administered to all students
participating in the study. Two control groups consist-
ing of eighteen grade two and three students were also
given the task. Although the groups were not controlled
to ensure close match, a general inspection of students'
performance levels in the classroom and of performance
while engaged in the task strongly suggests equality in
performance. Therefore, the findings should not be
casually dismissed. The results were compiled under the

following headings according to the degree of difficulty
encountered by the student while completing the task:
no difficulty; some difficulty; great difficulty.   A
check list was used to monitor on-task, off-task
behavior.

A comparison of the groups revealed that 84% of the
study subjects completed the task and 61% of the control
group completed the task.   Results indicating the degree
of difficulty students had with the task were signifi-
cantly different.   Students in the study group appeared
to have fewer difficulties with the task.   See Table VI.

TABLE VI

FINAL TASK FOR EVALUATING SELF-DIRECTED LEARNING

	No Difficulty	Some Difficulty	Great Difficulty
Study Group	50%	32%	18%
Control Group	22%	50%	28%

50% of the study group and 22% of the control group had
no difficulty; 32% of the study group and 50% of the
control group had some difficulty; 18% of the study
group and 28% of the control group had great difficulty.

Although there was a discrepancy in numbers of study and control subjects (44 study group; 18 control group) the results seem to indicate those who had completed the self-directed learning activity were more easily able to undertake an unrelated task requiring self-direction.

It was also found that 66% of the study subjects as compared to 44% of the control subjects were satisfied with their completed projects. This difference may have occurred because of the emphasis on self-evaluation in the program.

6. Program Evaluation Interview

The interview served two purposes. First, it was used to record student evaluations of the program in order to facilitate refinement. Second, the interview supplied important data regarding the students' perceived success of the program. The survey, therefore, included both formative and summative evaluation questions. Program modifications resulting from information obtained from this survey were discussed in Chapter 5.

The responses for this survey were elicited by a recorder. It was found that primary students responded much more fully and spontaneously when they were not

required to record their own responses. The responses were then analysed as either being in favour of or in opposition to using the materials again.

The results indicated that 30% of the students would not like to use the materials again. However, 20% of that number qualified their negative responses by saying that they would like to try the program again later but not right away; or they would like to do the project but not go through the entire program package again. 70% of the students gave unqualified positive responses.

From these results it seemed reasonable to conclude that a majority of the children were not only comfortable with the materials but had also enjoyed working with them.

SUMMARY

The findings resulting from this study must be viewed as tentative for various reasons. The results, for example, are not comparative insofar as control groups were only used in the final task at which time two groups of students from outside the study were involved. It may also be that a major determinant of students' performance was the result of the majority

being taught by the researcher. It does not seem un-
reasonable to suppose that in general students might
perform better on unfamiliar tasks because of this
unique relationship and because of the author's famili-
arity with the materials. A further limitation was
determined by the lack of readily available appropriate
instruments. Surveys and other data collection devices
were, therefore, constructed by the author.

The purpose of the study as originally stated was
to develop a set of materials that would enable primary
students to complete a self-directed learning project
on their own within a three-week time frame. Upon com-
pletion of the program, data from both formative and
summative measures of evaluation indicated that it was
possible for primary students to successfully complete
a project by directing their own learning. Field
development data clearly indicated that students were
comfortable with both the format and learning level of
the final form of the materials. Although a large
number of students exhibited a high degree of self-
directedness while working on their projects, the data
indicated that only a small number showed a signifi-
cant shift from dependence to self-direction during the
course of the study. Pre and post measures on the pro-

cess skills survey revealed very little increase in skill development even though teacher observation indicated that students were increasing in concept comprehension as the program progressed. The most significant increase was evidenced in the results of the attitude survey. Statistical analysis confirmed that a very significant number of students scored higher on the post-test than on the pre-test. Responses on the course evaluation questionaire supported the notion that students were comfortable with the materials and would like to use them again. Finally, results of the final Task for Evaluating Self-Directed Learning indicated that the study group more often completed their projects with less difficulty than the control group and were more positive in the evaluation of their products.

DISCUSSION

The findings of the study generally confirms its expectations that primary children are able to direct their own learning given a set of materials which teach the process skills. Even though analysis of the data implied that there was no significant growth in skill development students were able to use the modified materials with ease and comfort. Since results of both

pre and post-surveys were low it might be concluded
that the format of the survey which required written
responses on the questions used to elicite those res-
ponses were not the best possible means of obtaining
the required data.

The second major finding of the study was that
students experienced a significant change in their
attitude toward self-directed learning. Statistical
analysis revealed a highly significant increase in
student scores on the Primary Self-Directed Learning
Project Survey of Attitudes post-test over the pre-
test scores. This change in attitude was particularly
evident in the 'Task' phase of the program. Students
who exhibited insecurity and frustration at the begin-
ning of the program were able to undertake the 'Task'
with much greater self-confidence and more positive
attitudes. Although the descriptive approach to this
study did not allow for more definite reasons for this
occurrence, it is possible that the change in attitude
may have been caused by the increased responsibility
students experienced in a self-directed learning situ-
ation.

A third important observation was that all chil-
dren to a greater or lesser degree went through what

Gibbons has described as the self-education crisis.
Diary entries and check lists clearly indicated this
aspect of self-directed learning. Students exhibited
behaviors ranging from extreme hostility to minor
frustration. It became evident that counselling, group
support and positive encouragement were crucial in help-
ing students through this crisis phase. Because of
these observations a section was added to the Teacher's
Guide with suggestions for helping teachers cope with
this crisis.

It was also observed by both the author and Mrs.
Varley that there appeared to be little or no evidence
of a correlation between IQ and self-directed perform-
ance. Data obtained from both teachers revealed that
a high percentage of the most intellectually capable
students in a teacher-directed situation were unable
to perform effectively on their own. It was felt that
perhaps enough time had not been given to transition
type of experiences which would help very teacher-
dependent students to become independent in a non-
threatening manner.

These results must provide questions concerning
the practice which commonly reserved self-directed
learning experiences exclusively for the gifted or

intellectually superior. The findings of this study would indicate that such emphasis is misdirected and that our responsibility should be to ensure that all children have the opportunity to become self-directing individuals.

Evidence of attitudinal changes in students was obtained from various sources: student responses on the course evaluation survey; recorded observations of students in action planning their projects and exhibiting self-directed behaviors; and attitude surveys. And while students may have been influenced by the nature of the program treatment, these data would support the inference that students successfully managed their own learning.

The issues that were raised have been either formally illustrated by data or confirmed by Mrs. Varley where observations and experience were brought to bear. The study confirmed that a successful program could be developed and that the program could be effective in meeting the purpose of the study.

RECOMMENDATIONS

It seems appropriate at this point to make recommendations both for future investigations and also for

teachers interested in implementing the program.

Both the evidence of the data provided by this study as well as the relative newness of the area investigated -- particularly as self-directed learning relates to primary students -- support the notion of a need for self-directed learning. The results and limitations of the present study provide the focus for several salient points of reference from which future investigations might commence. The following suggestions, therefore, are recommended for consideration. First, that an experimental design incorporating a control group be considered mandatory in order to ensure comparative support for the data. Second, that a more rigorous empirical study be initiated to study the further effects of self-directed learning on attitude, skill performance and student readiness for self-direction. Third, that more accurate instruments, surveys and observation tools be constructed to ensure a more precise measure of self-directed learning on student behavior. Fourth, that as many subjects as possible be selected from classes other than those taught by the researcher.

It is evident that the research presented in this study represents a very meagre beginning when one con-

siders the investigative possibilities in the area of self-directed learning in relation to the primary student. It would seem, therefore, imperative to stress the need for further research in this area.

It is the opinion of the author and Mrs. Varley that the materials used in this study have been refined into a worthwhile and appropriate program for use in the primary classroom. As with any program, refinement should never cease. Teachers using the materials, therefore, should continue to modify and refine them as the educational situation demands.

Observations made while working with the materials suggested a number of recommendations for future implementation. First, that the guide be utilized more fully with regard to giving children many experiences with the various process skills particularly in the form of mini-projects. Second, that students, especially those used to very teacher-directed environments, be given a longer transition period from teacher-directed to self-directed situations. The Teacher's Guides provide useful ways by which to achieve this transition. See Appendix D. Third, that the student's readiness for self-direction be considered in terms of student maturity and those skills required to effectively plan and organize a self-

directed learning activity. The attitude survey used for this study provides one useful indicator of student readiness. See Appendix E. Also useful is a teacher observation check list which indicates those students who exhibit self-directed characteristics such as: independence, self-confidence, risk taking, determination, realism in self-expectations, and having a drive toward completion. Fourth, it is extremely important to establish conference schedules which are both formal and informal and which include both groups and individuals. Lastly, it is important to establish self-evaluation criteria in many varied situations so that children learn to trust their own evaluative judgments.

As this study has provided evidence that primary students are capable of directing their own learning, it would seem not only desirable but of great future consequence to provide children at an early age with the means to become self-educators.

APPENDIX A

FINNY AND FINELLA

First Draft
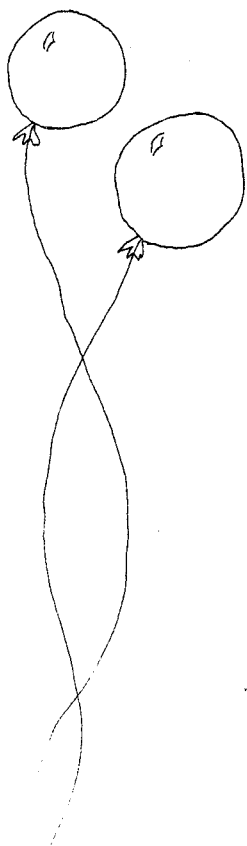
A
Resource
Book
for
PRIMARY
INDEPENDENT
STUDY
PROJECTS
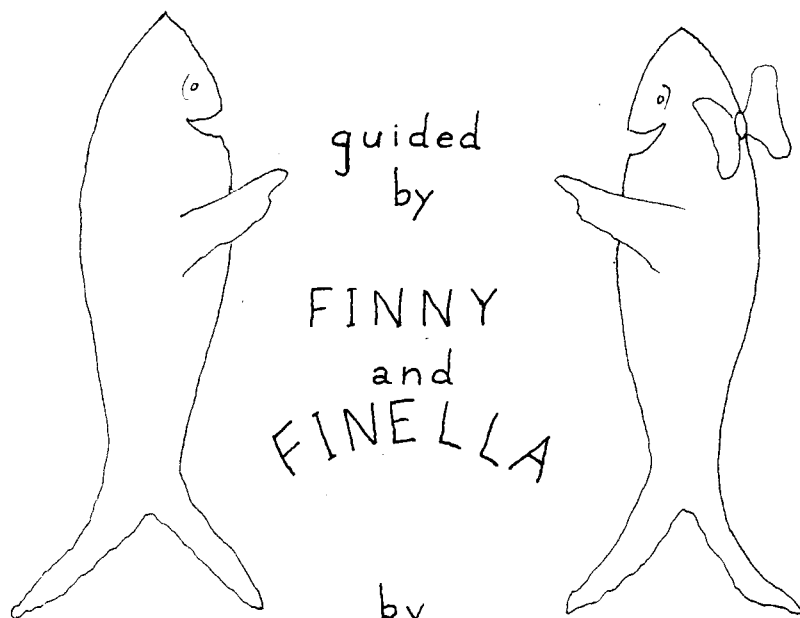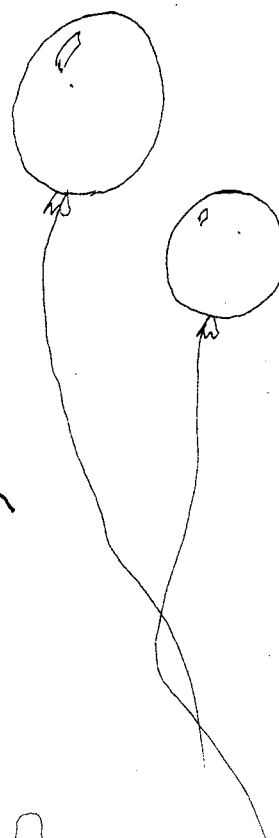
guided
by

FINNY
and
FINELLA

by
Frieda H. Ashworth

To The Teacher:

It is the opinion of the writer that young children are capable of undertaking independent study projects. This handbook is an initial attempt to provide students and teachers with the means by which to accomplish this.

There are many personal benefits to the child in addition to those study skills described on the following pages. The aquisition of skills such as independence, self reliance, self confidence and self discipline are encouraged through such an adventure.

Role Of The Teacher:

Teach: those entry skills which children require to complete the activities in the handbook.

Provide Motivation: to encourage and guide children in areas of goal setting, time management and finding resources.

Monitor: help children solve problems as they arise; ensure that children are meeting their own goals and time lines.
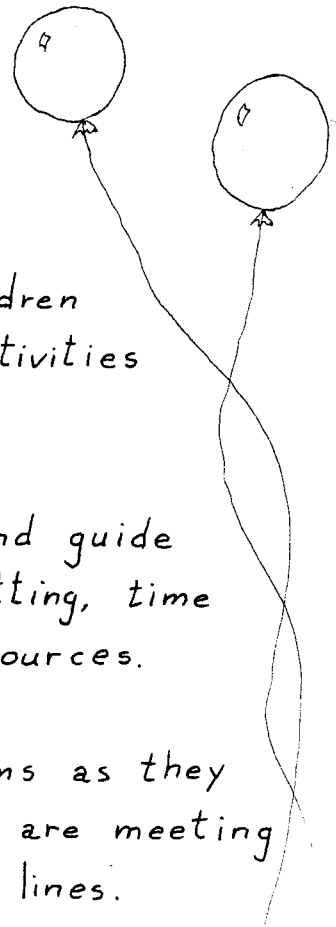
Project Description:

Level: Primary grades - any children reading at a minimum grade 3 level.

The project consists of 3 sections. The combined sections of the package are designed to give children the necessary skills for completing an independent study project on their own.

Students ultimately undertake an independent project of their own choice while following the directions and guiding activities in the student handbook.

Throughout the handbook the children are guided through the Independent Study process by two guides Finny and Finella (fish).

Part 1 - "<u>Finny and Finella Help (student's name) Get Ready to Undertake an Independent Project.</u>" The zoo is the setting and forms the basis for all the activities and demonstrations in the handbook. In this way children are taught the skills necessary for undertaking an Independent Study Project.

Skills include:
1. Observation - pictorial
   - literal
2. Questioning - interviewing
3. Reporting
4. Research
5. Organizing
6. Letter writing

Part II - "Finny and Finella Help (Student's name)
Plan an Independent Study Project."
Children are taken through all the planning
stages by imitating and expanding the
examples given by Finny and Finella.
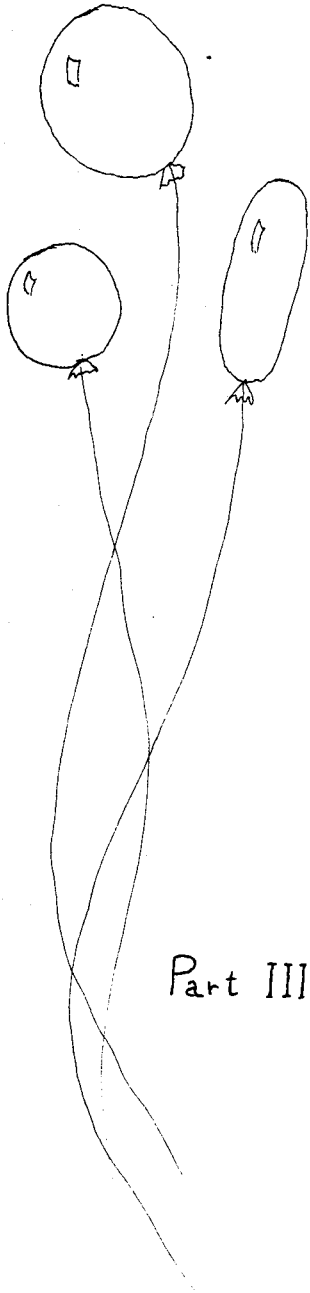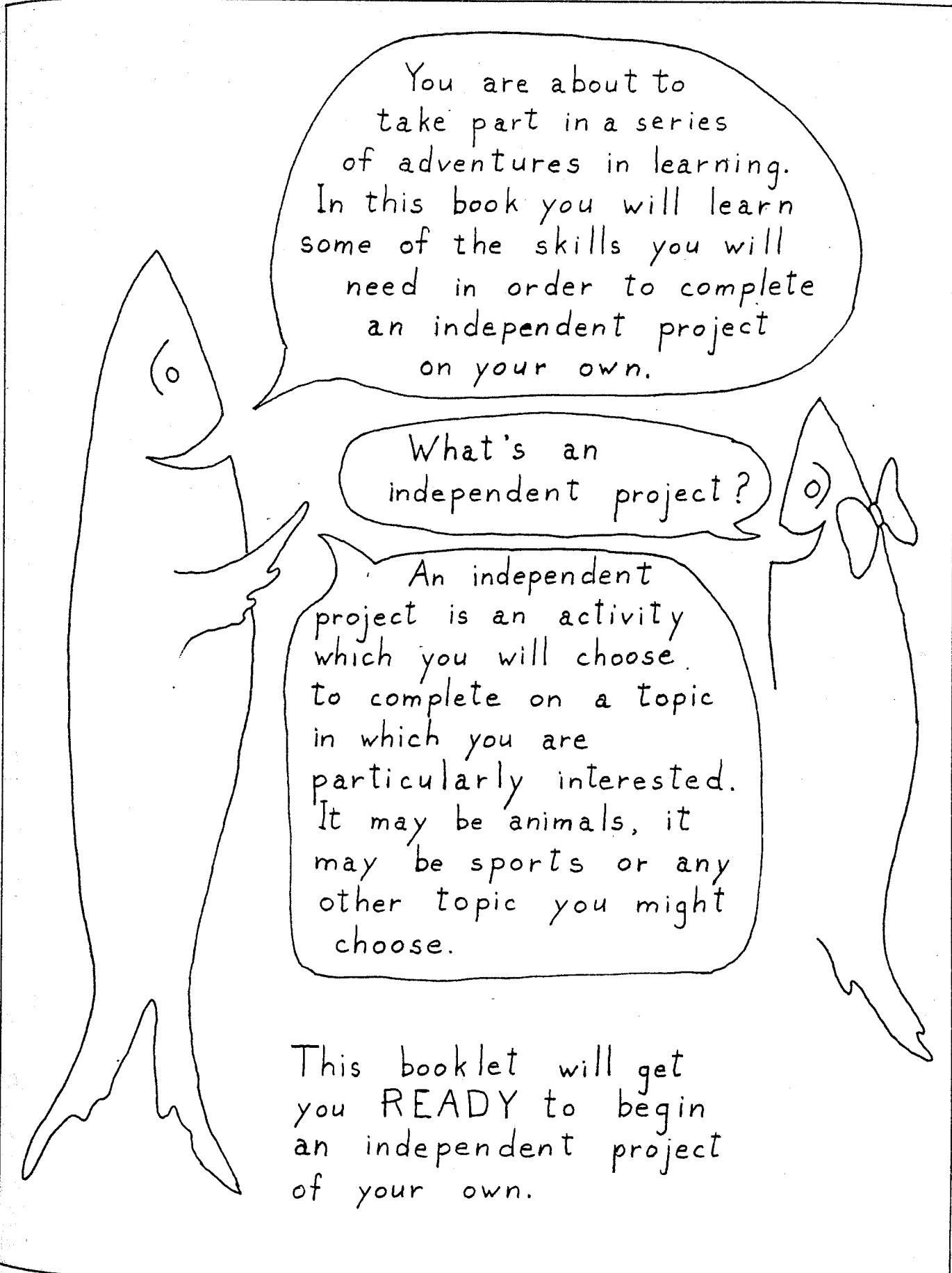
e.g. Finella chooses to study the whale. The
student chooses an animal from any of the
various classifications of animals: mammals,
fish, insects, etc. They are taken through
the following process:
  a) choosing a topic
  b) setting a goal
  c) checking for various resources
  d) choosing a final product
  e) planning learning activities leading to
     a final product
  f) setting a time line
  g) planning a sharing session

Part III - "Finny and Finella Guide (student's name)
Through the Steps of an Independent Study
Project." The child is now ready to attempt
his own project. The process is very
simply reviewed as the child is guided
and encouraged to explore on his own
in order to complete an independent
study project of his own choosing.

FINNY
and
FINELLA
take

_____

to
the

Z OO

GETTING READY
for
INDEPENDENT STUDY
Part I
by Frieda H. Ashworth
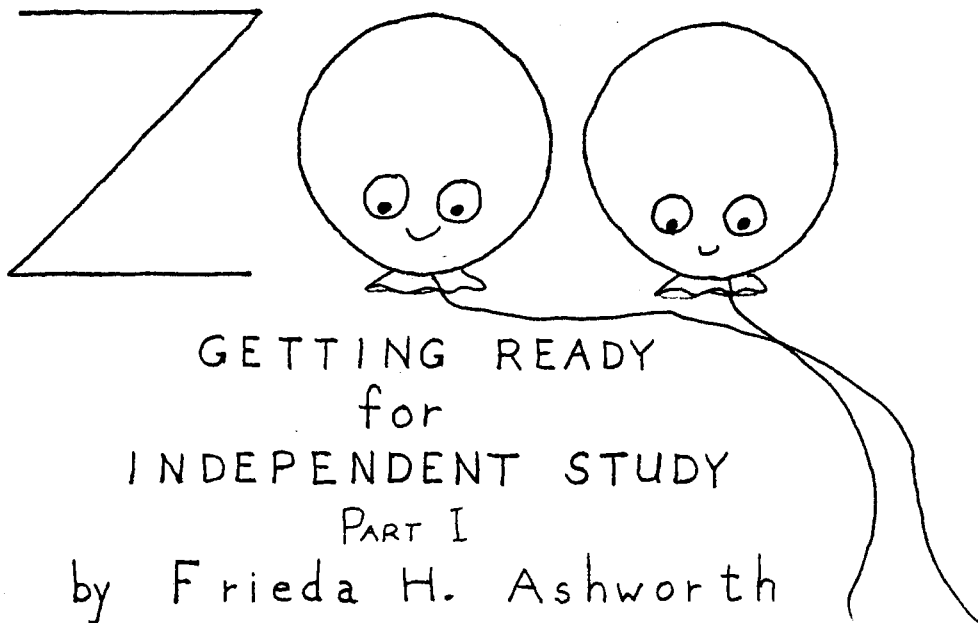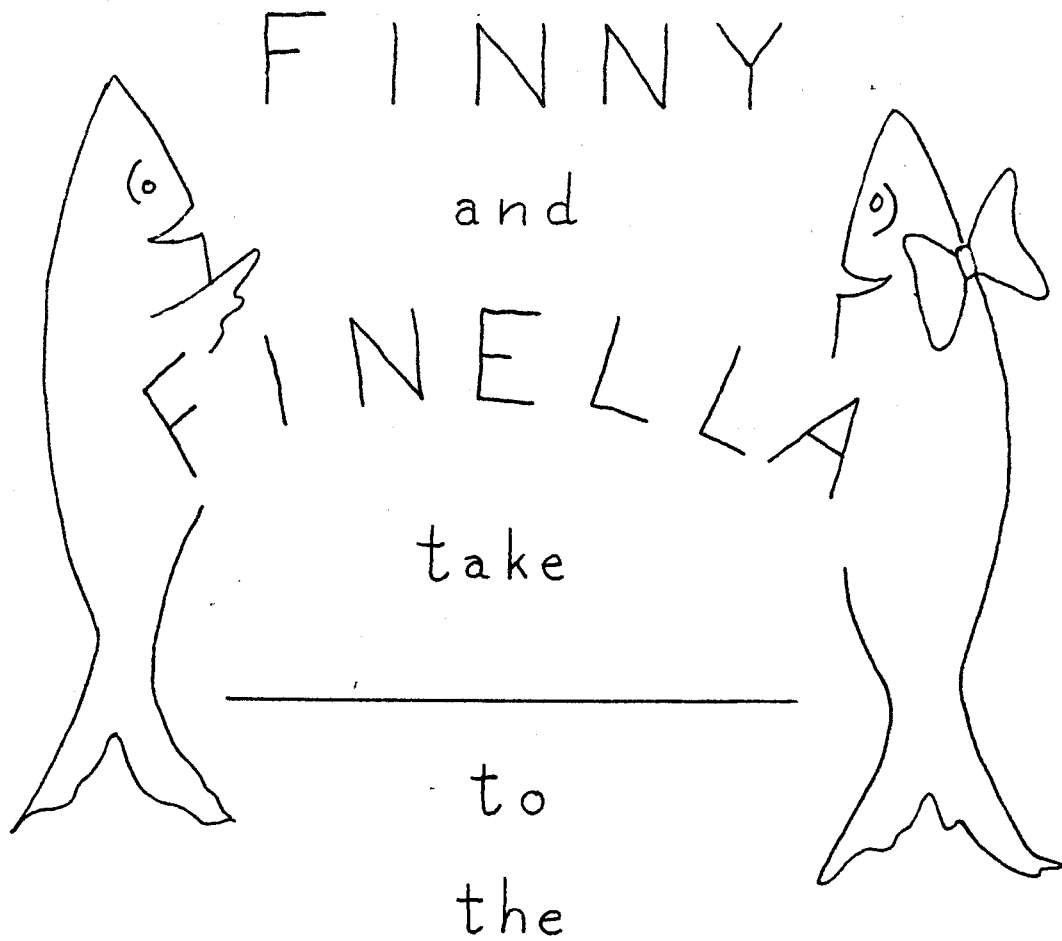
You are about to take part in a series of adventures in learning. In this book you will learn some of the skills you will need in order to complete an independent project on your own.

What's an independent project?

An independent project is an activity which you will choose to complete on a topic in which you are particularly interested. It may be animals, it may be sports or any other topic you might choose.

This booklet will get you READY to begin an independent project of your own.
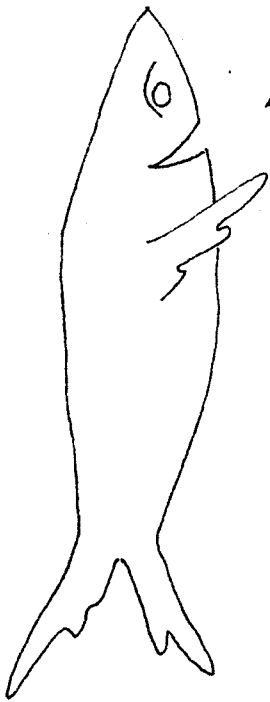
Before you begin here are some very important directions to remember.

REMEMBER:

1. Take plenty of time. Work at your own speed.

2. Read carefully. Everything is important.

3. Work on just one page at a time.

4. Do not jump ahead. Never go ahead to the next page until you are finished the one you are working on.

5. You may go back and reread pages that you have already done.

* Have you read number 4 very carefully? Write number 4 instructions in your own words.

_____

_____

2

The first part of your adventure will take place in the Stanley Park Zoo. You may not know this particular city zoo but you may know some places similar to it.
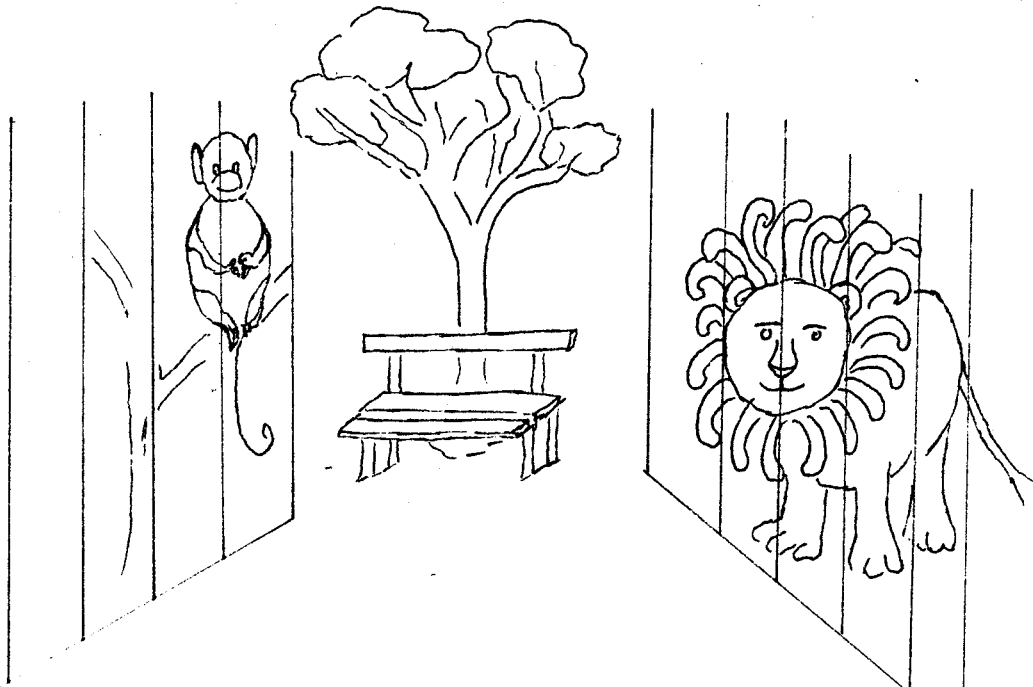
VANCOUVER ZOO
Entrance
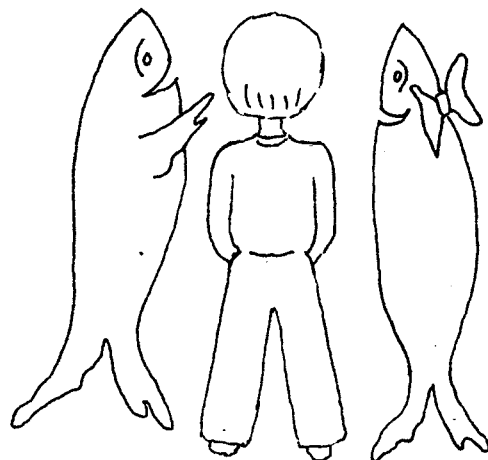
You will have two guides to take you on your tour through the zoo. Their names are Finny and Finella. Come and meet them now.
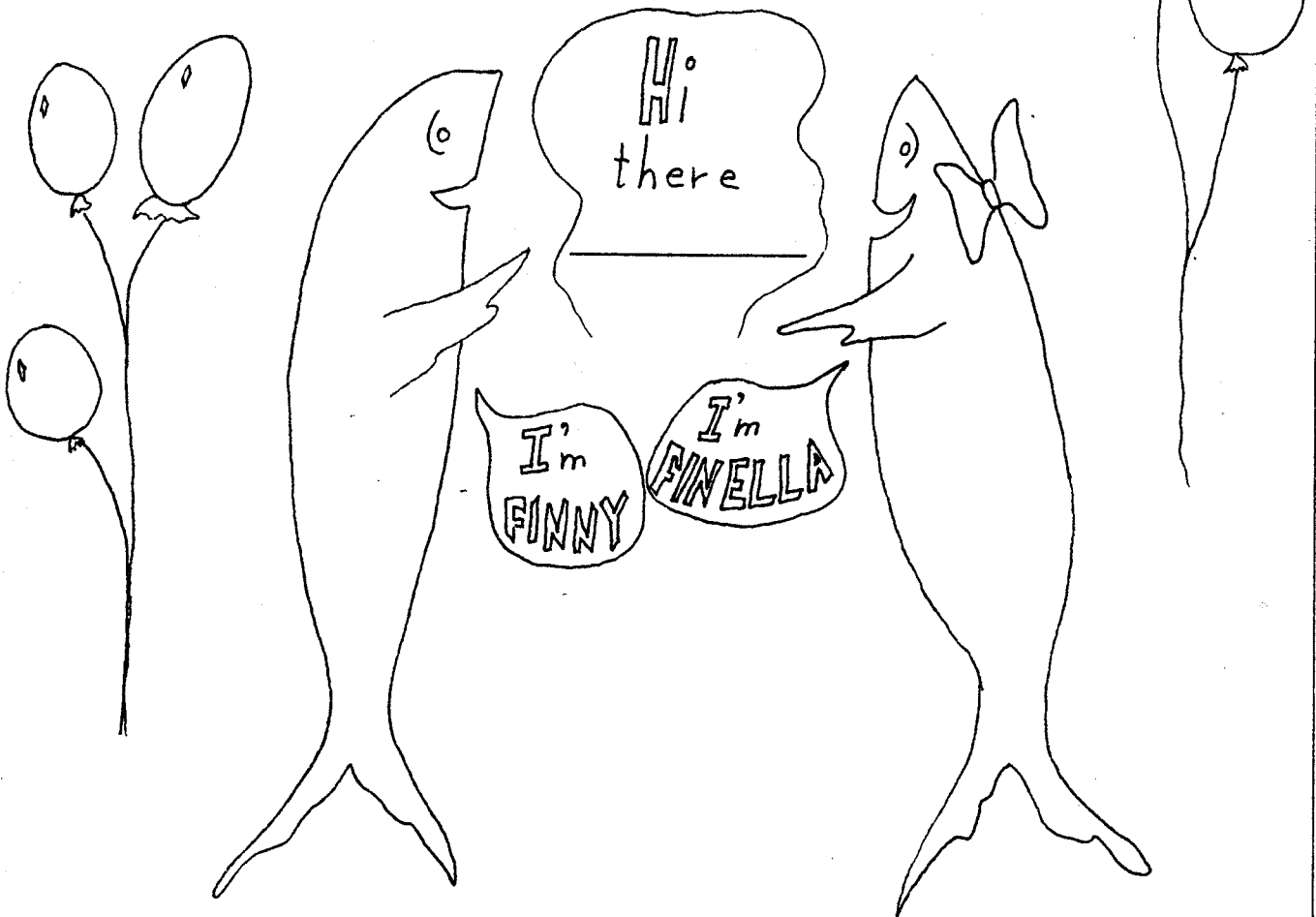
You have probably already guessed that Finny and Finella belong to the fish family. And as you know that most fish live in "schools" they must be very smart.

4

C'mon Finella let's go!

Our first stop will be at the monkey cage. Are you ready_____?

⊛ List all the things you can see in this picture.

_____   _____

_____   _____

_____   _____

But, there are all kinds of things you can't tell from a picture, Finny.

You mean like the smell of the popcorn and the sound of the lion's roar or the feelings you get?

Finella is right. There are many things a picture can't tell us.

Close your eyes and imagine the smells and sounds in a zoo.

Now write down some of the smells and sounds.

Smells   Sounds   Feelings

_____   _____   _____

_____   _____   _____

_____   _____   _____

_____   _____   _____

Hey _____!
Do you have a pet at
home or in your classroom?
Or maybe you could
find an insect on your
school yard.
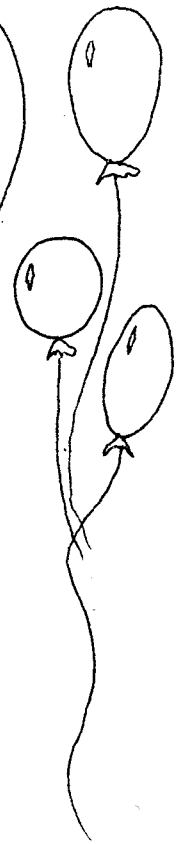
⊛ **Find** an animal or insect.
⊛ **Use** the following chart to
record some interesting
things about the animal or
insect.
⊛ **Write** as many words under
each heading as you can.

⊛ **Name** of animal or insect _____

SIZE	COLOUR	SMELL	SOUND	WHERE IT LIVES

Did you {remember} to use <u>words</u> and <u>numbers</u> for the size. For example an insect that is <u>1 cm.</u> long could also be described as <u>small</u>.

You might wish to go back—and—add some more words to your chart.
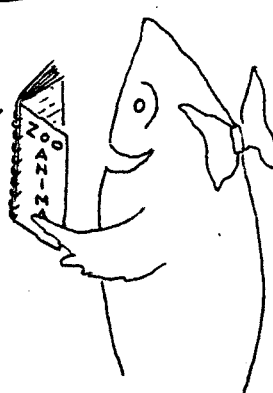
Now ⊛DRAW a picture of your animal or insect.
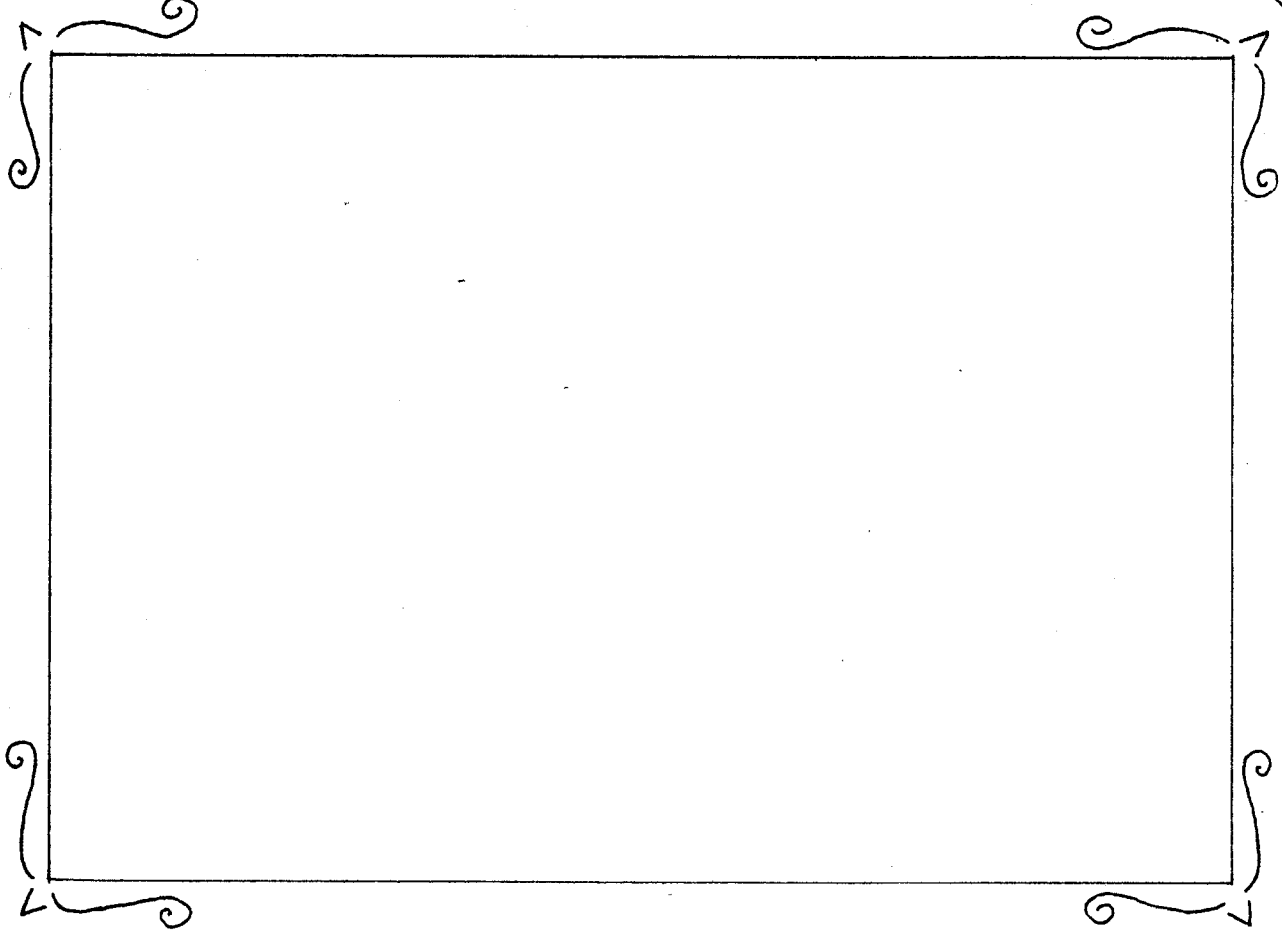
⊛Write a sentence telling how your insect or animal is different from the monkey.

_____

_____

_____

8
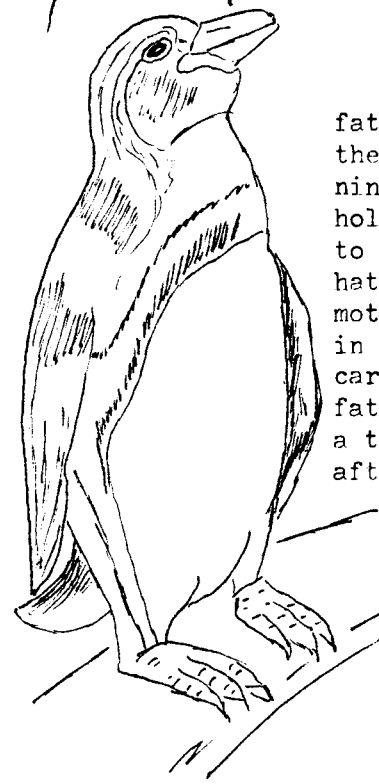
Let's go look at the Penguins now, Finella. They are my favorite birds at the zoo.

I have a book about Penguins Finny. Shall I read what it says to you?
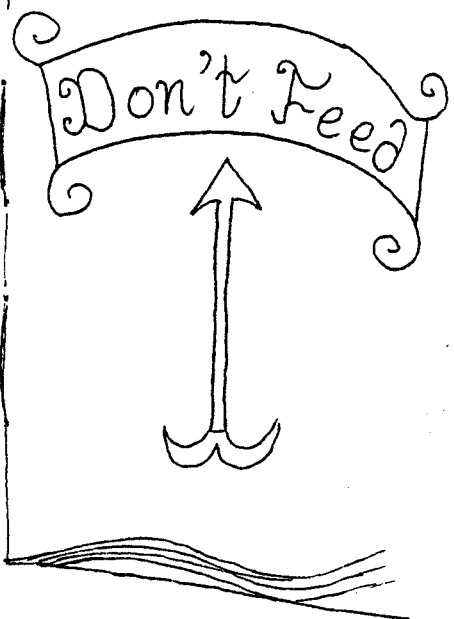
Here is the information from Finella's book. ⊛Read it carefully.

Penguins

Both the mother and father penguin help to care for their one darling baby. For nine weeks the father penguin holds the egg on top of his feet to keep it warm. When the baby hatches out of the egg, the mother comes back from feeding in the ocean nearby. Then she cares for the chick while the father goes away to feed. After a time he returns and then looks after the young one.

Don't Feed

9
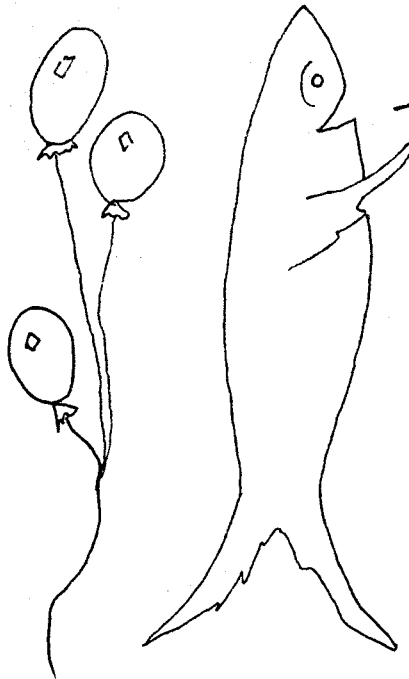
What was the main thing you learned about Penguin babies from the book, Finella?

Why don't we ask _____ ?
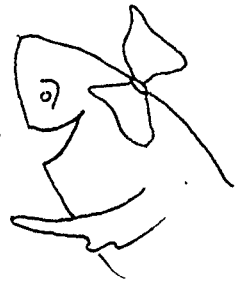
_____ -what was the most important thing you learned about Penguin babies from the book? Write it down.

_____
_____
_____
_____

Now Illustrate this main idea.
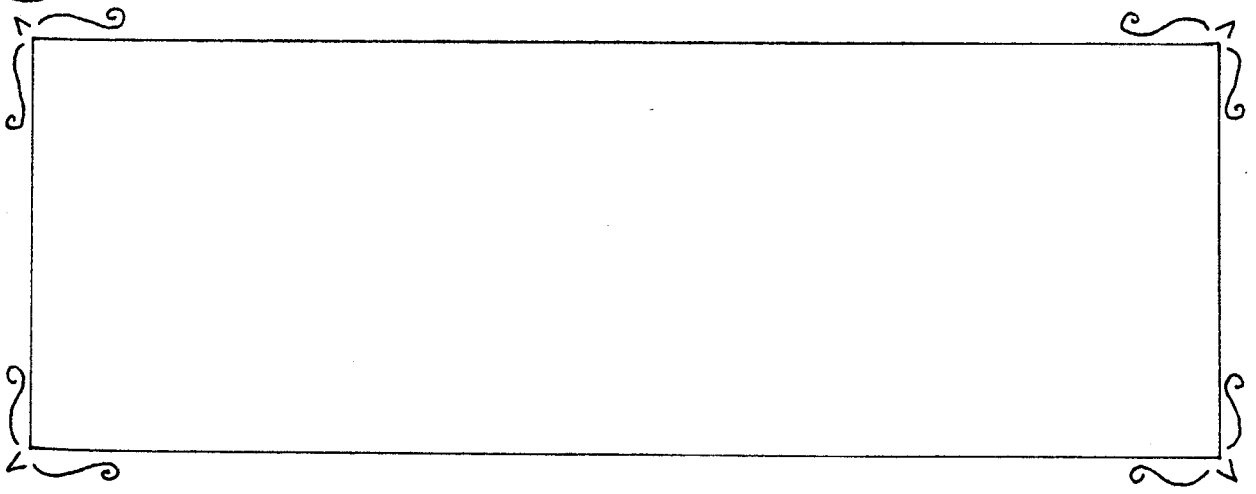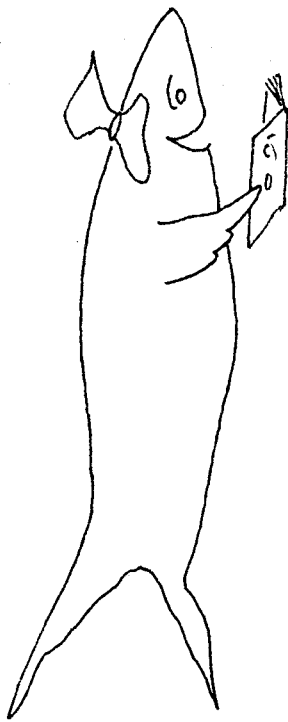
> Say, this book also has a picture of a Polar Bear and two cubs, Finny.

> Let's go see the Polar Bears. C'mon _____.

> These bears look just like the one's in my book. But, they certainly are'nt living in the zoo.

Look carefully at the picture from Finella's book.
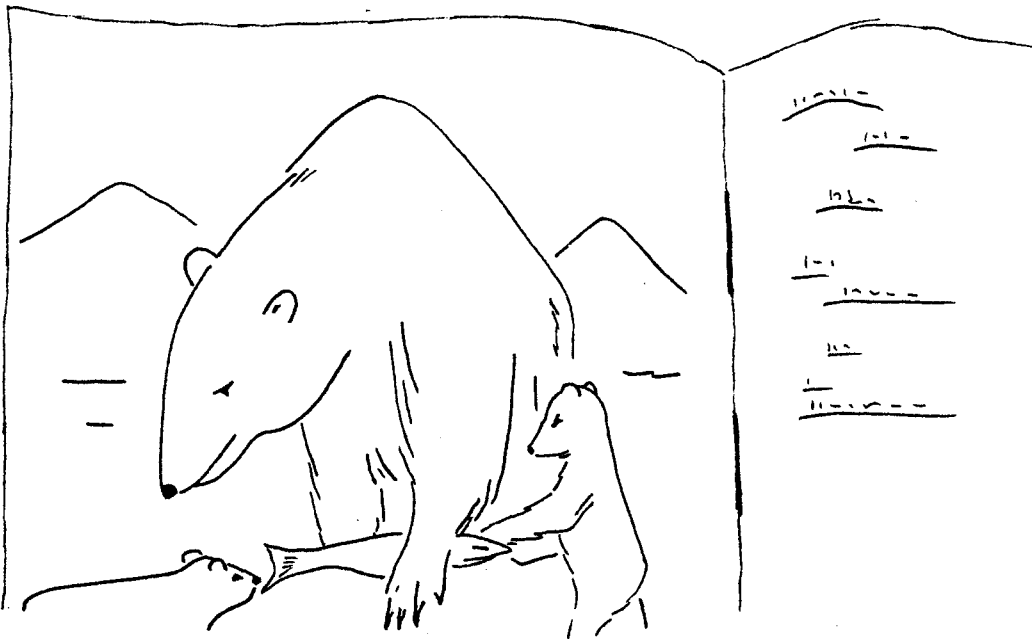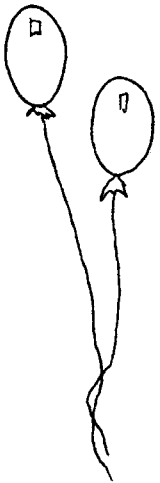
On the following page write sentences telling:
1) Where the animal lives.
2) What it eats.
3) How it gets its food.

11

Polar Bears

Where they live ?

_____

_____

What it eats ?

_____

_____

How it gets its food ?

_____

_____

Draw a picture of things polar bears like to eat.
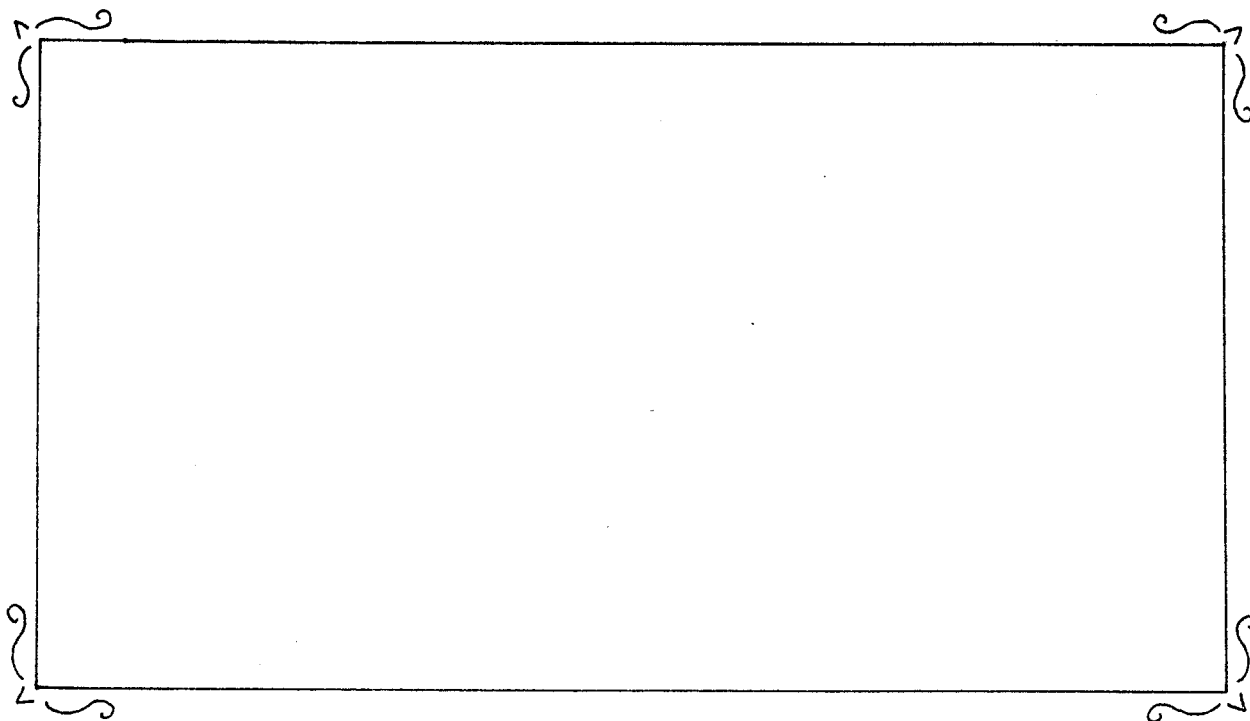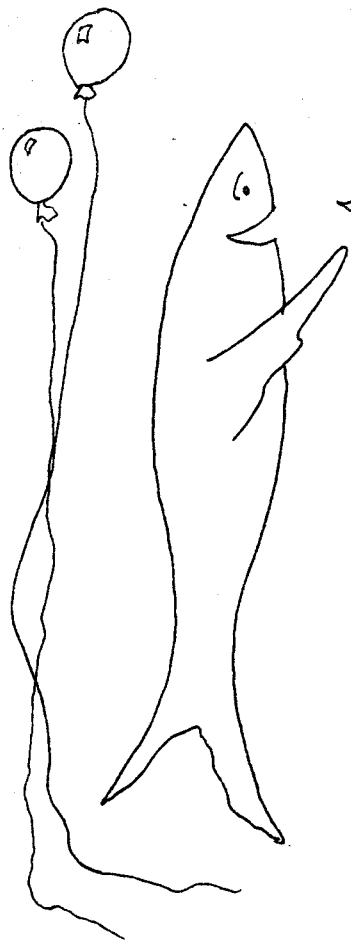
One of my favorite birds at the zoo is the parrot. Let's go see _____ .

My book doesn't say much about the parrot.   could you write a paragraph describing the parrot? Then I'll include it in my book.
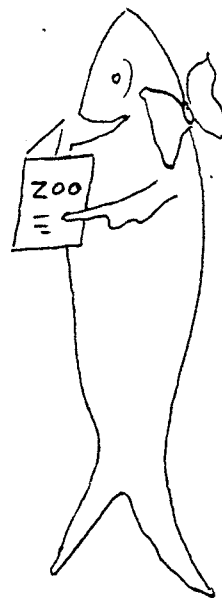
⬇ Here's how you do it

First: You write 5 words about parrots.

⬇

Second: You write your 5 words into sentences.

⬇

Third: Arrange your sentences in order.

Remember to indent and punctuate your sentences.

✱ If you wish you can write more words and more sentences.
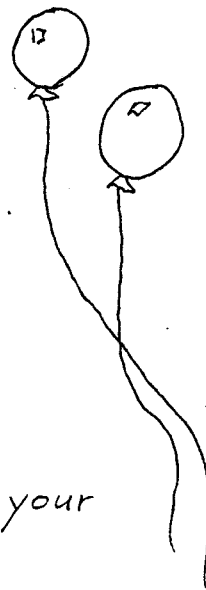
ⓍNow you are ready to begin.

1. Five words

_____   _____
_____   _____
_____   _____
_____
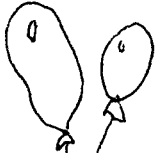
2. Five sentences using the five words above

_____
_____
_____
_____
_____
_____
_____
_____

3. Arrange the sentences in order.

_____
_____
_____
_____
_____
_____
_____
_____
_____
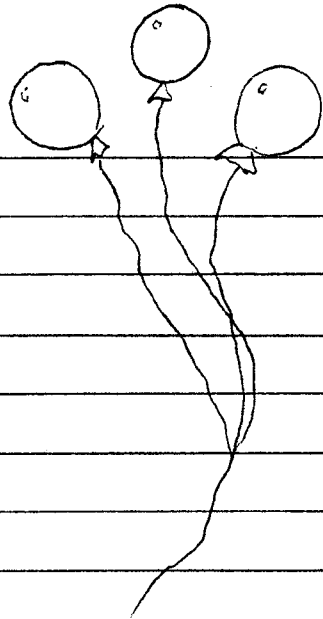
Did you {remember} to indent ?
Did you {remember} to punctuate ?
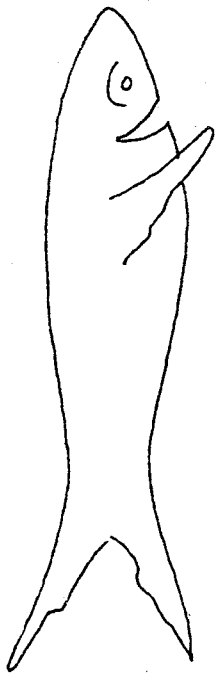
Do you see that man standing by the cages, Finella? He's the zoo keeper.

Why don't we ask him questions about the animals and what he does to take care of them.
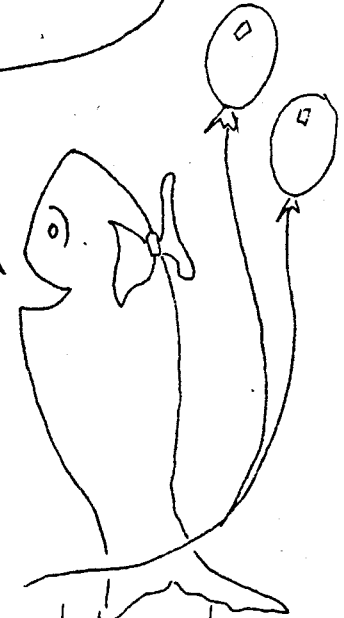
List 10 questions that Finella might ask the zoo keeper. [Remember] most questions begin with: _how_; _when_; _where_; _why_.   Use each word at least once.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
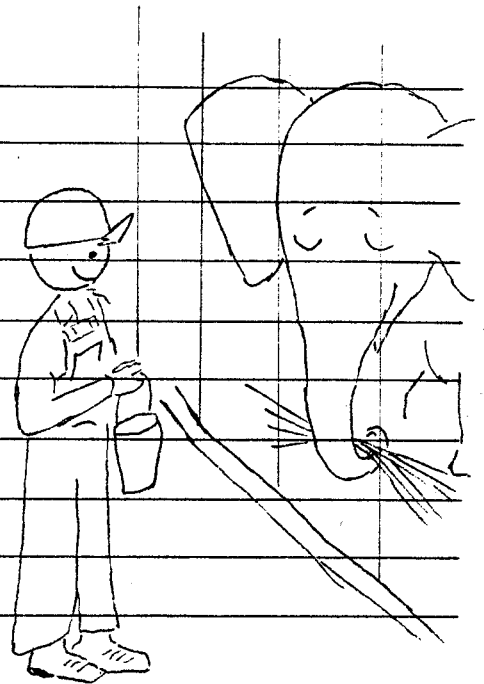
That was fun _____.
We hope to see you again
soon. Don't forget to
let us know how you
are getting along.
We'd love to hear
from you.

EXIT

✳ Write a letter to Finny and Finella
thanking them for taking you through the
zoo.

Here is a _sample letter_ for you to
follow.

> Your name,
> Your address,
> The date.
>
> Dear Finny and Finella,
>
> _____
>
> _____
>
> _____
>
> Your friend,
> (_your name_)

If you don't remember your address ask your
teacher or parents to help you.

<u>YOUR LETTER</u>
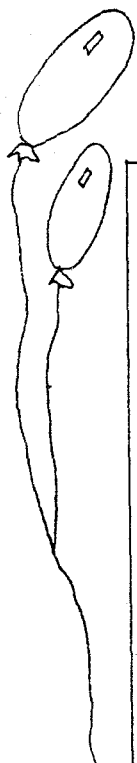
_____
_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____
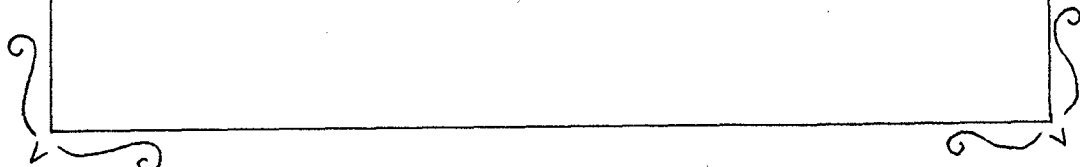
FINNY and FINELLA
are very proud of

YOU

_____

They would like to
give you the following
"AWARD"

To _____ for

successfully completing
the GETTING READY
booklet

CONGRATULATIONS

FINNY
and
FINELLA

help

_____

plan

an

Independent
Study Project

written by Frieda H. Ashworth
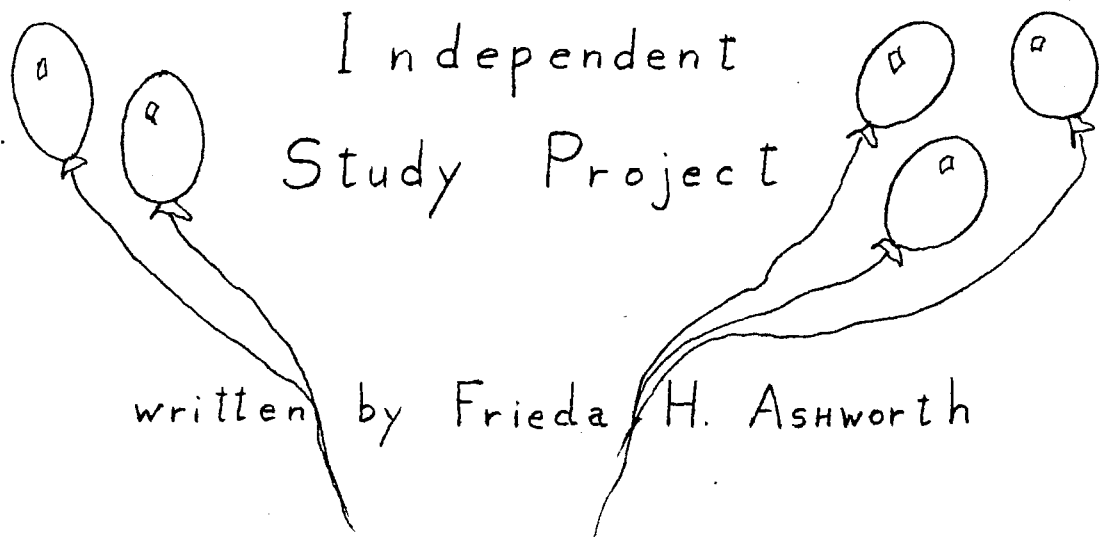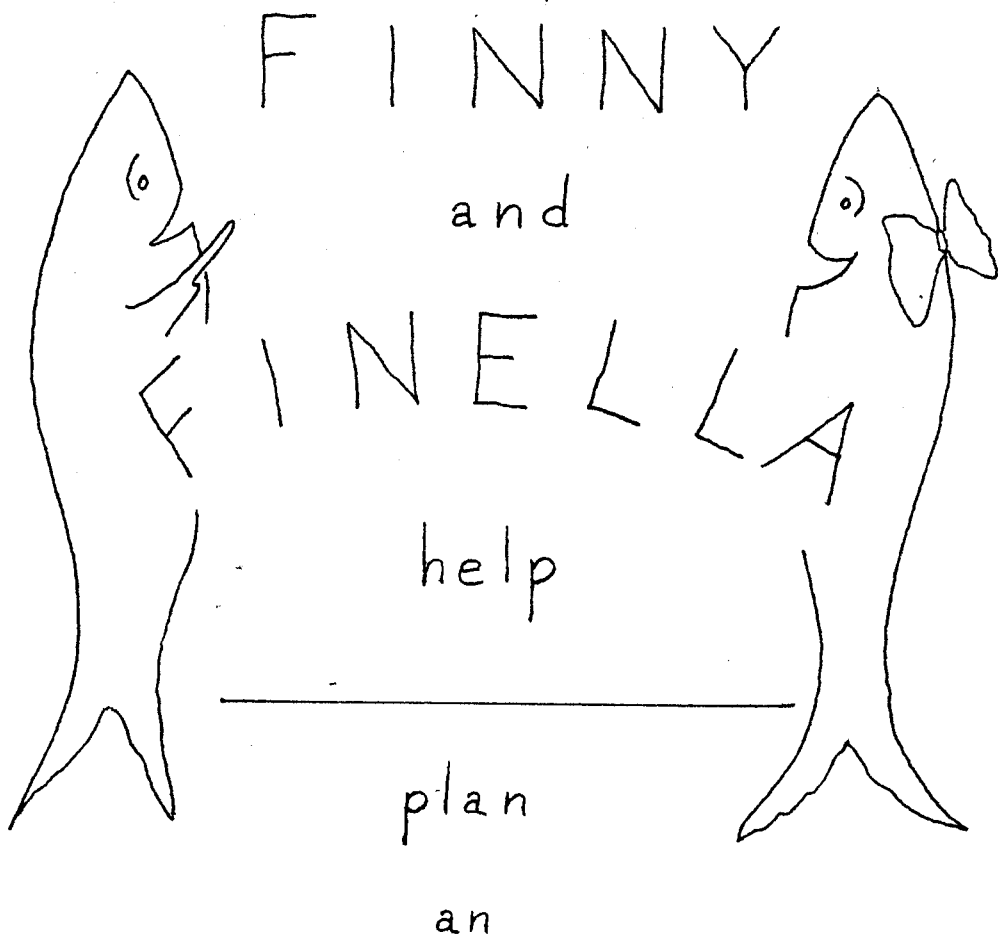
Part II

In this booklet you will learn to PLAN an independent project.

Finny and I will help you with every step of the planning.

Remember:

1. Take plenty of time. Work at your own speed.

2. Read carefully. Everything is important.

3. Work on just one page at a time.

4. Do not jump ahead. Never go ahead to the next page until you are finished the one you are working on.

5. You may go back and reread pages that you have already done.

1
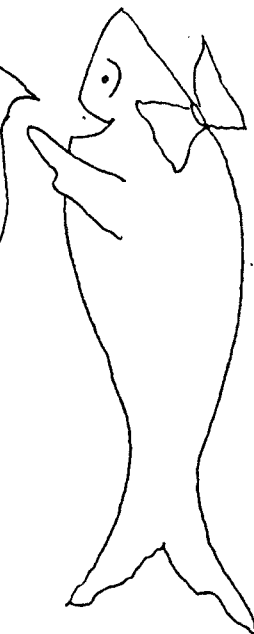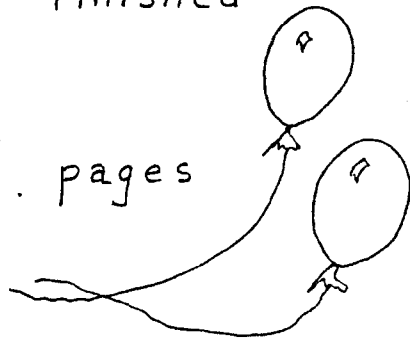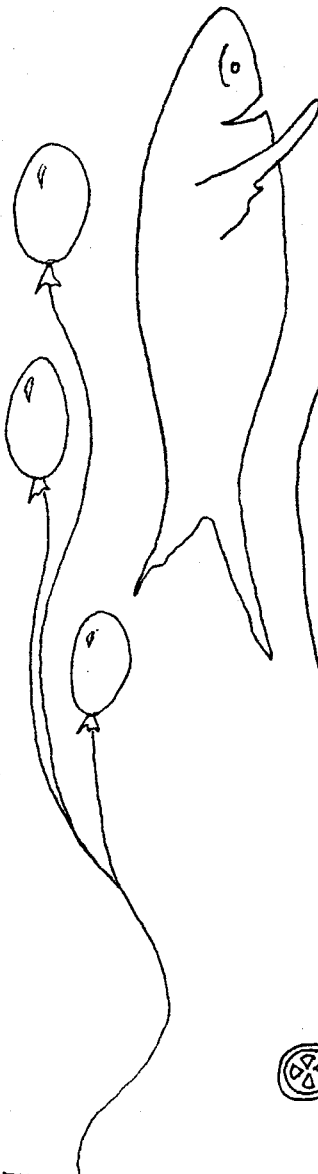
That was a super letter you wrote us, _____. Finella and I really enjoyed reading it.

That was such a great trip through the zoo that we'd like to take you through the Aquarium this time, _____.

There are many animals in the Aquarium. Did you know that fish are animals _____? Try to name the five classifications of animals.

ANIMAL CLASSIFICATIONS

1. _____   2. _____

3. _____   4. _____

5. _____

If you didn't know them, where could you look to find the information?

_____

2

Where can you get information?

Name at least 4 sources. Sources can be <u>PEOPLE</u>, <u>PLACES</u>, or <u>BOOKS</u>. Finny will help you with the first one

1. <u>Encyclopedia</u>
2. _____
3. _____
4. _____

Now get the animal classification information from one of the above sources and answer the question on the previous page.

Finny has placed the correct answers on the bottom of the next page. <u>Check</u> to see if you have the correct answers.

ENCYCLOPEDIA

PUBLIC LIBRARY
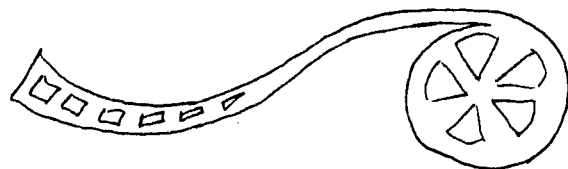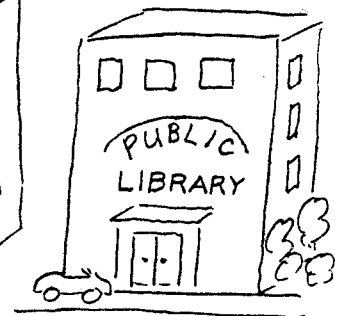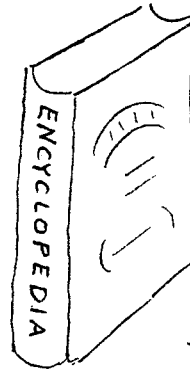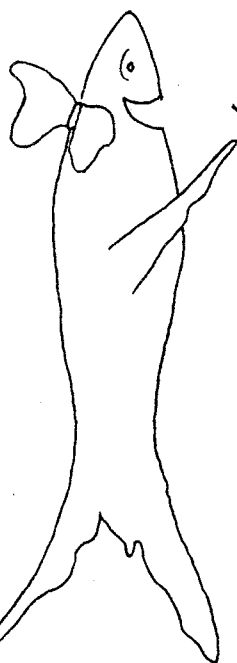
I'm ready to choose an animal for my project, Finny.

Not so fast, Finella. Why don't we look at all the possible animals we can first.

We'll make a chart and list as many as we can under each heading.
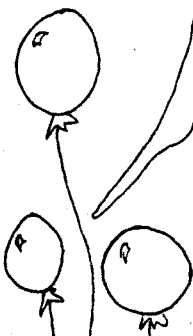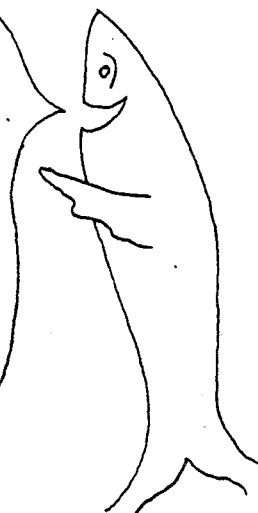
m_____	f___	b____	i_____	r_____

If you can't think of any animals turn back to page 3 and look at the sources for information.
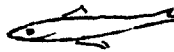
Answers for page 2:
mammals, fish, insects, birds, reptiles
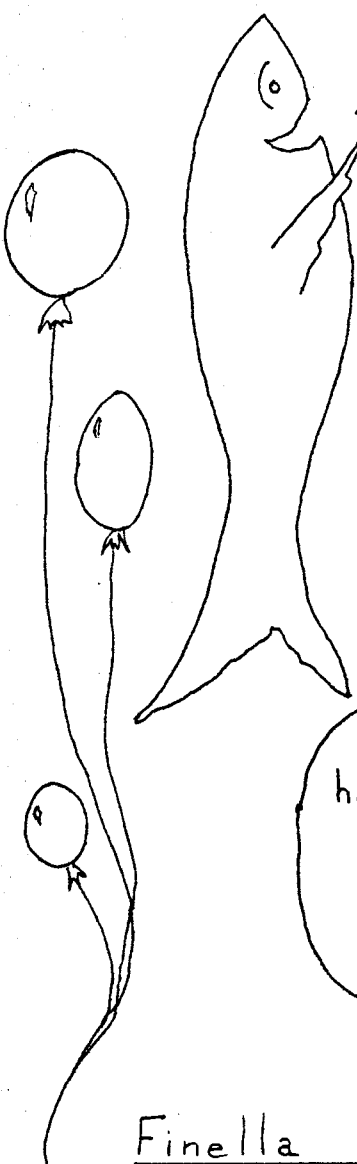
Now we are ready to think about a topic. Read the lists carefully. Choose three animals that interest you most.

[Place] three stars beside the one you like best, two stars for your next choice, and one star beside your last choice.

Oh, I see. Is this how you do it, Finny?
alligators ✴
whales ✴✴✴
sharks ✴✴✴

Finella has a problem. She has chosen both whales and sharks. She can really only choose one. What can she do?

⊕ [List] some things Finella might do to help her decide.

5
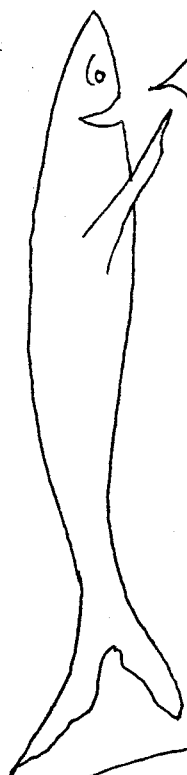
One way for Finella to decide is to check out the resources for her two top choices.

1. <u>Check the library</u> for a book to read.
2. <u>Find a person</u> to talk to who knows about the topic.
3. <u>Check the T.V. Guide</u> for shows on the topic.
4. <u>Ask</u> the teacher about <u>films</u> <u>or filmstrips</u>.

O.K. Finny. I'll check for resources for whales.

1 A <u>book</u> I could read is...

_____

2. A <u>person</u> I could talk to is...

_____

3. There's a <u>show</u> on T.V. called...

_____
about whales.

4. There's a <u>filmstrip</u> called...

_____
about whales.
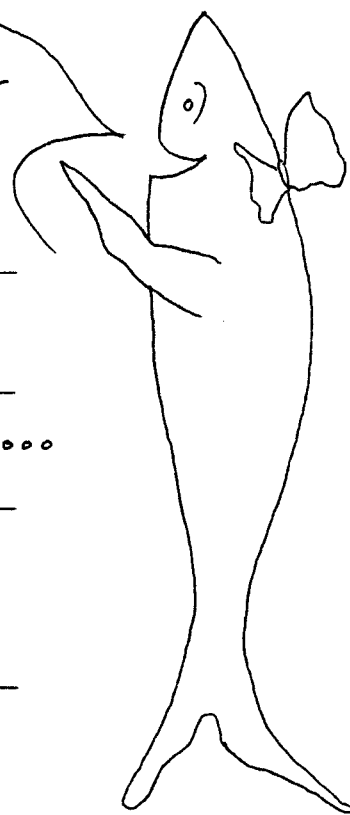
I know something else I could do. I could <u>write</u> to the "GREEN PEACE SOCIETY."
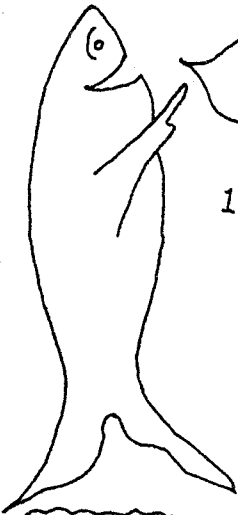
Now it's your turn, ——————————,

1. [Choose] 3 animals from your list on page 4.

————————————

————————————

————————————

2. [Place] 3 stars beside the one you like best.
Place 2 stars beside the one you like second best.
Place 1 star beside the one you like least.

3. [Check] out your resources for the choice with 3 stars.

Books I can read about

————————————
(name of animal)

ALL ABOUT

————————————

————————————

————————————

————————————
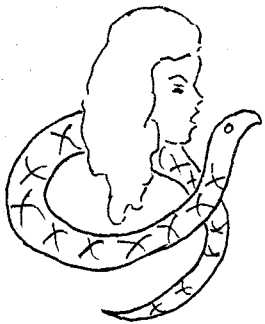
(A person) I can talk to
about _____
          (name of animal)
_____
(name of person)
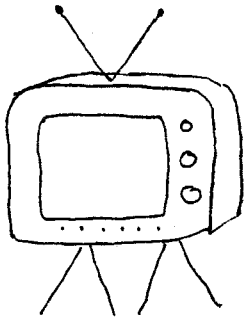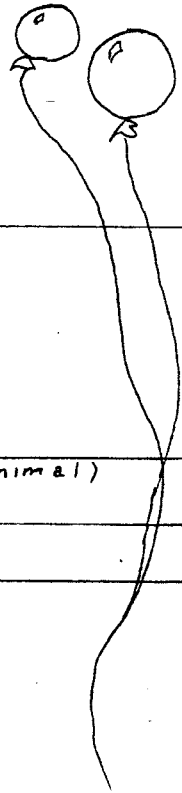
(A T.V. show) or place I could
visit to learn about _____
                        (name of animal)
_____
_____
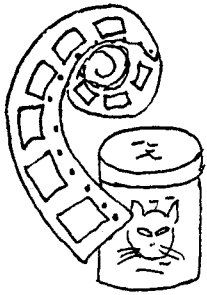
(A filmstrip) or movie I could
see about _____
            (name of animal)
_____
_____

(Other) people or places where I
can get information.
_____
_____
_____
_____
_____

NEWS!

The Zoo

OWL
magazine

SPCA
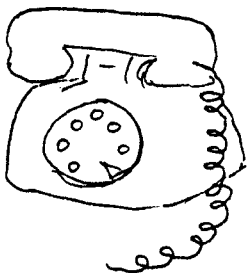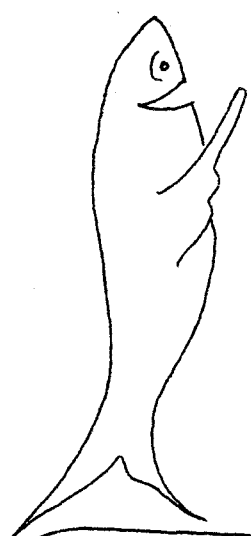
Now that you have chosen a topic, Finella and _____, it's time to set a goal for your project. What's your goal, Finella?

I want to learn as much as I can about Killer Whales and I want to visit the Aquarium and help feed Hyak, the killer whale.
What's your goal, _____?

AQUARIU

NEXT FEEDING
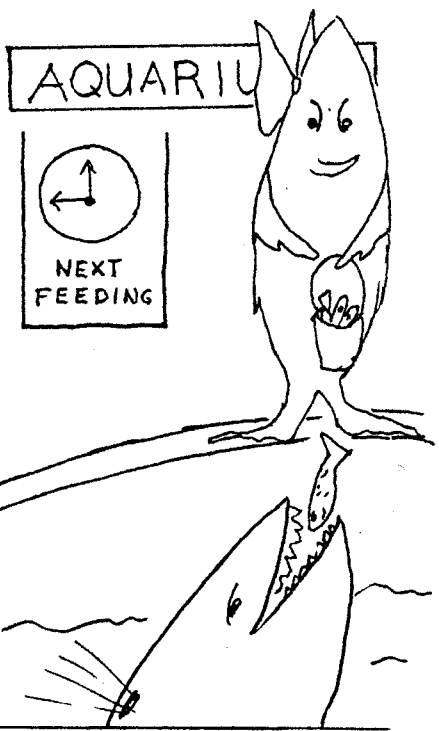
My goal:

_____

_____

_____

A neat activity, related to my goal, that I would like to try is

_____

_____

9

What are you going to choose as a final <u>product</u> for your project, Finella?

I don't know, Finny. I could make a booklet with information, pictures and diagrams; or a model with charts.....
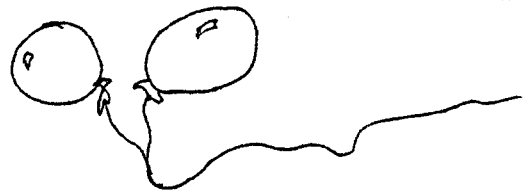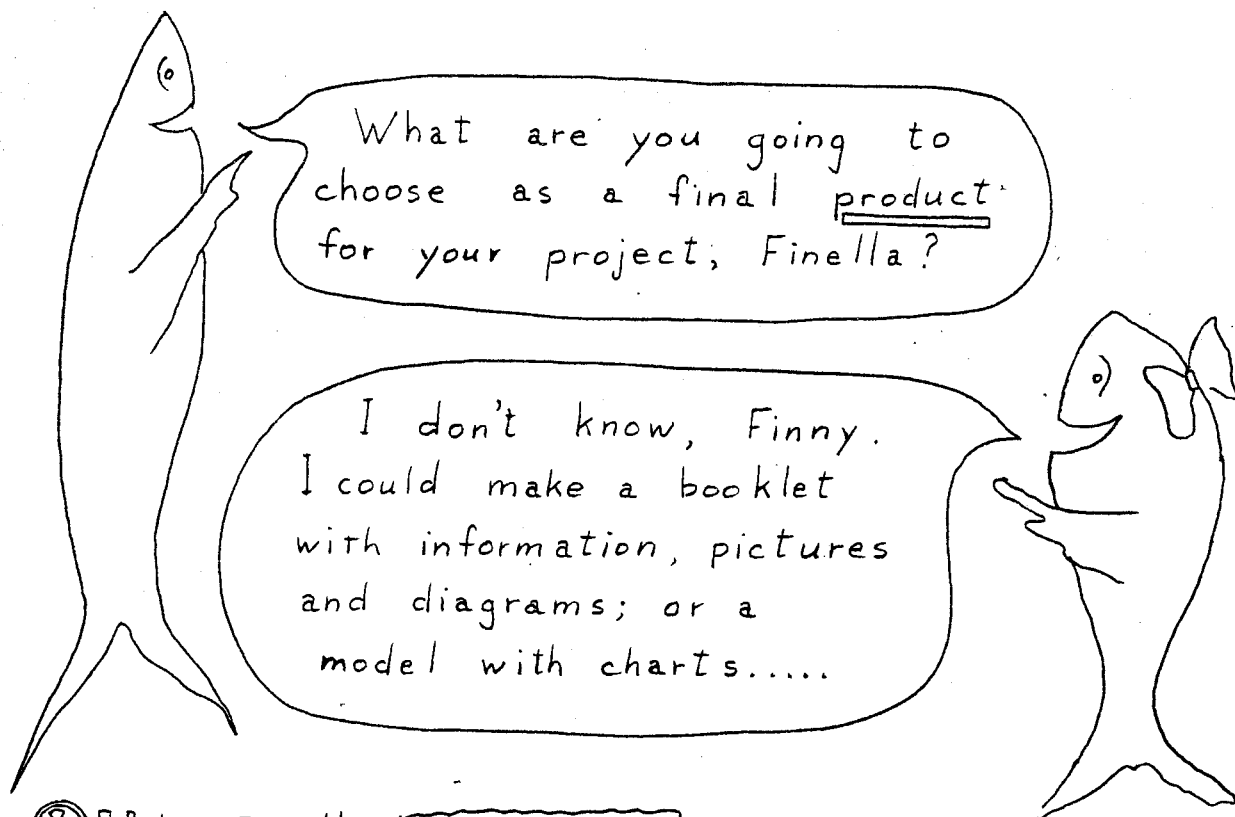
⊗ Help Finella make a list of possible products for her project. Think of as many as you can.

1. <u>Booklet with information, pictures and diagrams.</u>
2. <u>Model with charts.</u>
3. <u>Filmstrip and tape</u>
4. <u>Story book</u>
5.
6.
7.
8.

If you run out of ideas ask someone to help you.
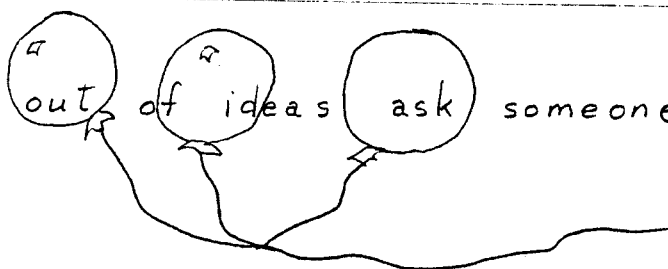
I know! I'm going to make an _information folder_ for people who come to see Hyak.

I'm also going to use my camera to take _pictures_ of Hyak to include in my folder.

GREAT IDEA! Finella.

HYAK WHALE
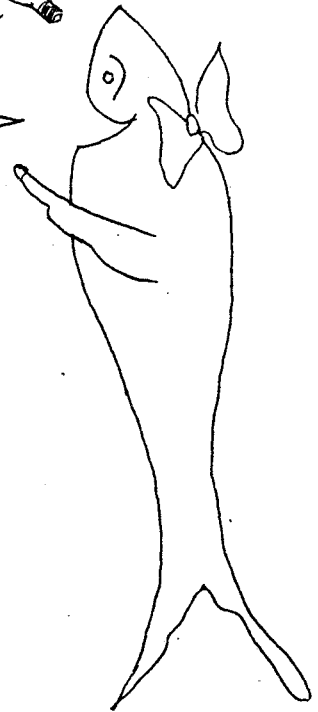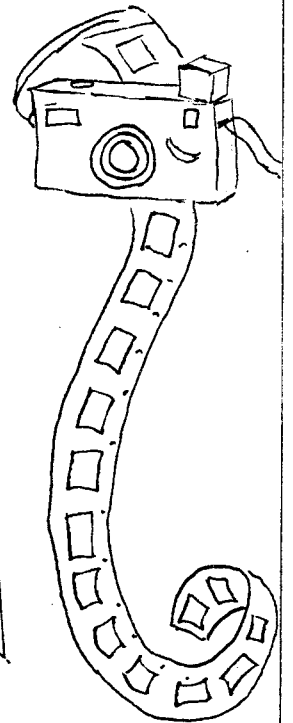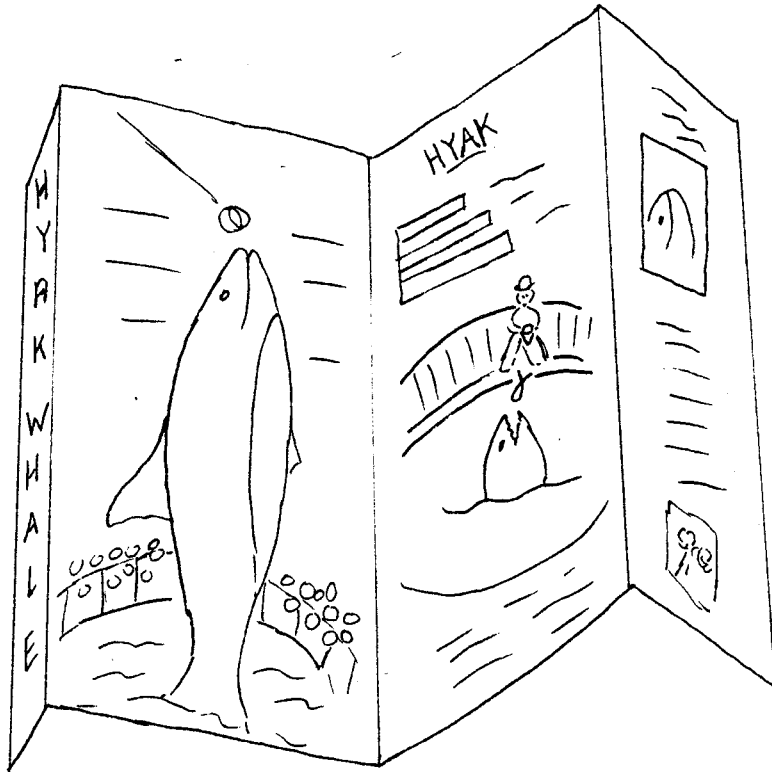
HYAK

I wonder if Hyak's trainer would let me help with the feeding one day? I think I'll ask him.
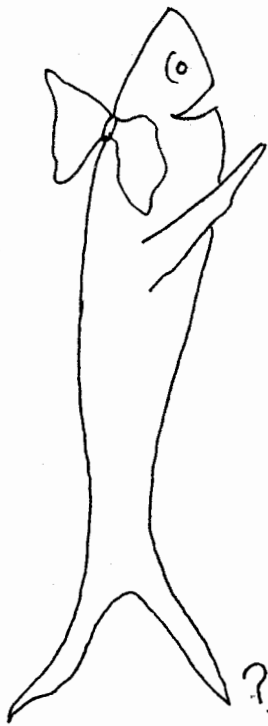
What about you _____?
Have you made a decision yet?

Here are some things to
think about before you decide.

<u>What</u> books will I read?

<u>What</u> equipment will I need?
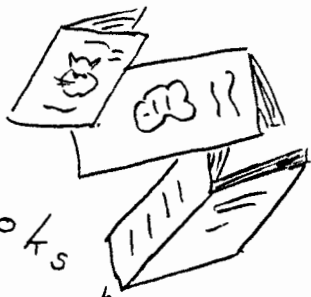
<u>Who</u> will I ask for information?

<u>Where</u> will I get my supplies?

<u>What</u> other sources can

I use to get

information?
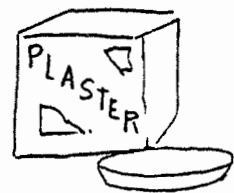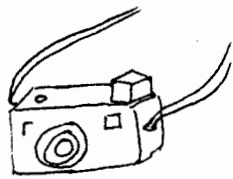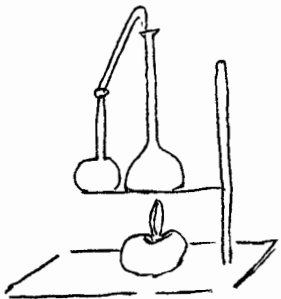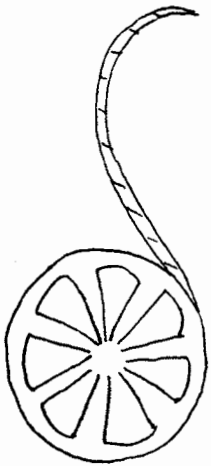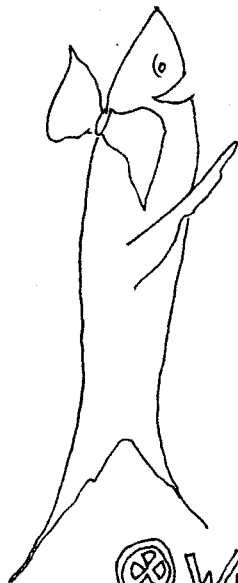
Let's help _____ by starting a list of possible products, Finny.

O. K. Finella.
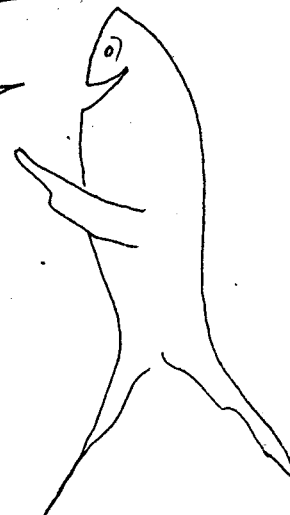
Write at least two more ideas below those suggested by Finny and Finella. If you have trouble check back to page 10.

List of Products

1. Slide - tape product.
2. Animal story book.
3. Bound book with pictures, information and stories.
4. Write and put on a play about my animal.
5. Cartoon booklet - each cartoon giving information about the animal.
6. _____
7. _____
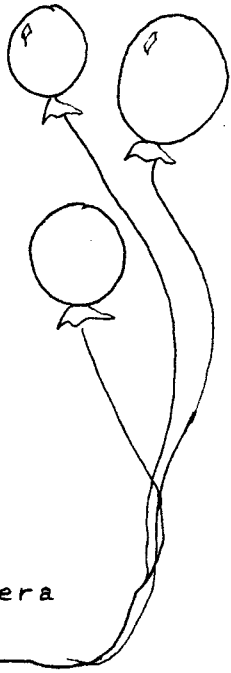
Now place a star beside the one you like best.

If you like 2 ideas, why not combine them and use both.

Time to plan my <u>learning activities</u>.

What are learning activities, Finella?

Learning activities are those things I will have to do so that I can make my illustrated information folder.
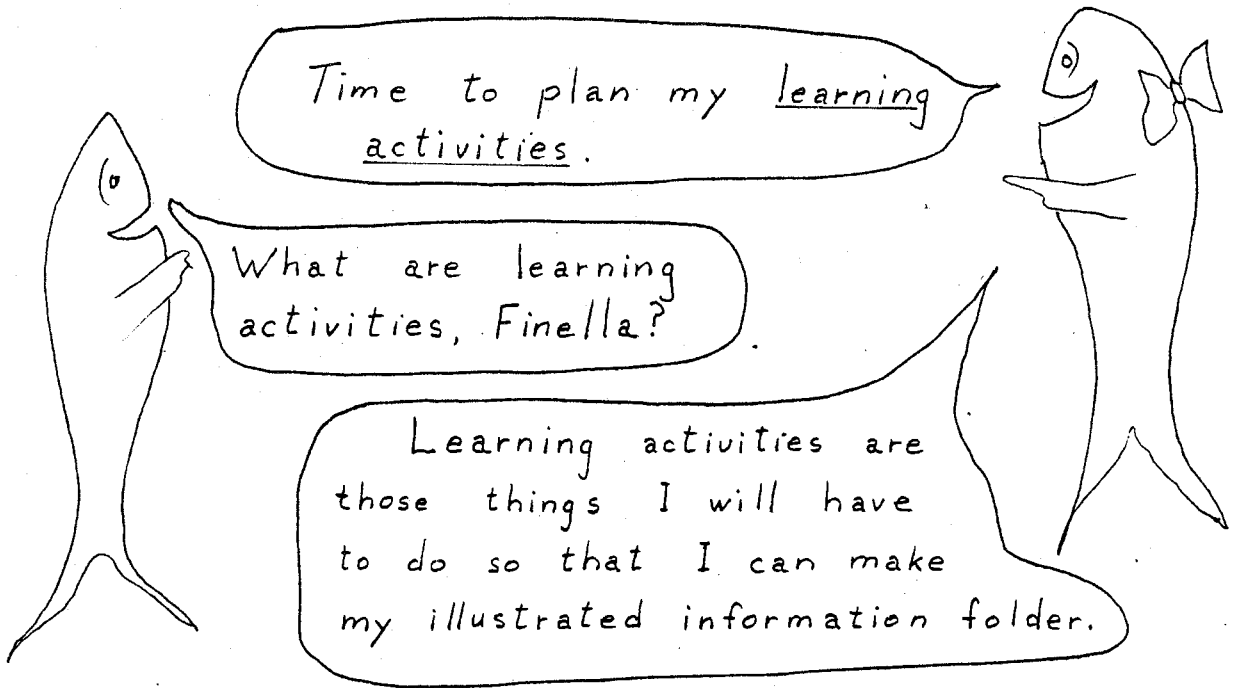
<u>Here is a list to show you what I mean.</u>

<u>I could</u>:

1. <u>Read</u> books
2. <u>Write</u> letters
3. <u>Draw</u> pictures
4. <u>Write</u> stories
5. <u>Visit</u> an expert
6. <u>Watch</u> a filmstrip
7. <u>Make</u> notes from a movie
8. <u>Draw</u> graphs and maps
9. <u>Write</u> poetry
10. <u>Make</u> a model
11. <u>Take</u> pictures with a camera
12. _____

{Add} your own ideas to Finella's list.

Now Finella, you need to make a list of all the <u>learning activities</u> you will need to do to complete your project.

O.K. Finny, here's my list !
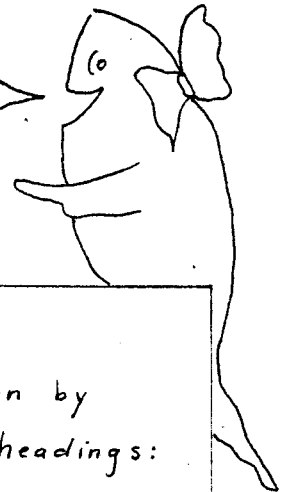
Finella's Learning Activities

1. (Read) books about the feeding habits and food eaten by killer whales. Make notes under the following headings:
   a) what killer-whales eat
   b) how much killer whales eat

2. (Write) a list of questions to ask Hyak's trainer about how much Hyak eats and how to care for him.

3. (Phone) Hyak's trainer and record the answers to my questions.

4. (Make) a graph showing how much Hyak eats each day for a week.

DAY	N° OF FISH				
MON.					
TUES.					
WED.					

5. (Take) pictures of Hyak, mount and label.

6. (Write) a daily diary for a week in Hyak's life. I'll pretend I'm Hyak.

7. (Ask) Hyak's trainer for permission to help feed the whale.

_____, are you ready to list all your learning activities? If you have trouble be sure to ask your teacher to help. This is one of the most important parts of your project.
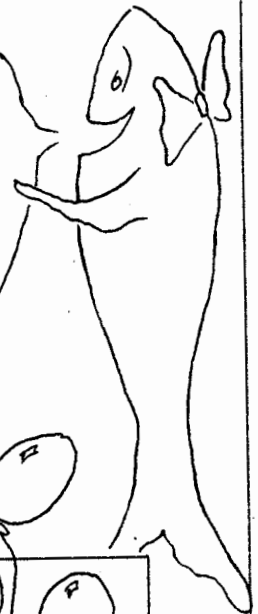
My Learning Activities
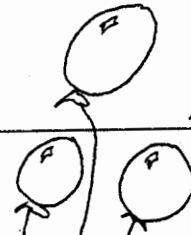
1.	
2.	
3.	
4.	
5.	
6.	
7.	

Finella, it's a good idea now to [list] all the things you'll need to do to make your product!

Yes, of course, I'll need to .....
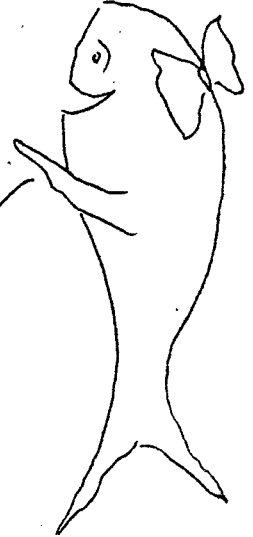
1. [Set] up a place to work.
2. [Make] my folder.
3. [Get] a camera and film to take pictures of Hyak.
4. [Get] the pictures developed.

PRODUCT ACTIVITIES are the things you need to do to actually make your final product.
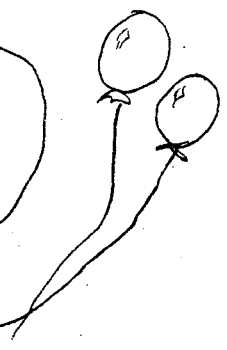
Now it's your turn
What things do you need to do?

MY PRODUCT ACTIVITIES

1.
2.
3.
4.
5.

clay

Players
Present
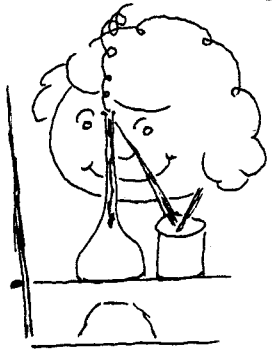
Let's look at what we've done so far. Let's put all Finella's planning together and see what it looks like.
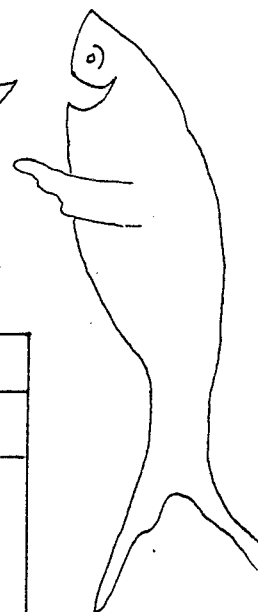
FINELLA'S PROJECT PLAN

TOPIC: Caring for killer whales in an Aquarium

GOAL: To learn as much as possible about what killer whales eat and how they feed in an Aquarium.

PRODUCT: Information folder with photographs.

LEARNING ACTIVITIES:

1. Read books about food needed by whales
2. Write a list of questions to ask Hyak's trainer about what and how he feeds Hyak.
3. Make a graph showing how much and what Hyak eats each day.
4. Take pictures of Hyak
5. Pretend I'm Hyak and write a diary for a week telling what I do and what I eat.
6. Ask Hyak's trainer for permission to help feed Hyak.

PRODUCT ACTIVITIES:

1. Set up a place to work
2. Make a folder
3. Get camera and film to take pictures of Hyak
4. Get pictures developed.

Hi _____ ! Now you go ahead and put all your information together the same way Finella did it. Ready? Let's go! If you can't remember go back to pages (9) (12) (16)

☆ ☆ ☆ ☆ MY PROJECT PLAN ☆ ☆ ☆ ☆ ☆
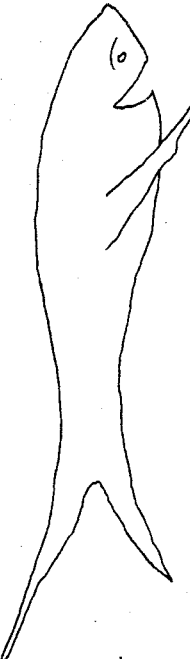
TOPIC:

GOAL:
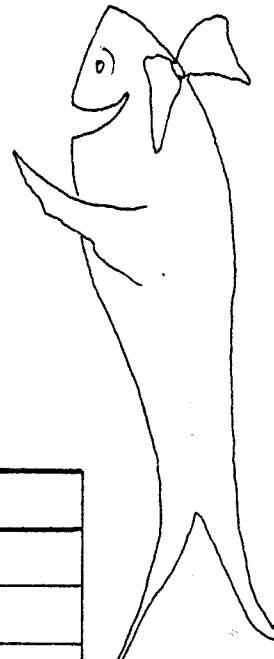
PRODUCT:

LEARNING ACTIVITIES:

PRODUCT ACTIVITIES:

When are you going to do all your activities, Finella? You've only got <u>2 weeks</u> to finish the whole project.

I guess I'll have to make up a time-line, Finny.

<u>Here's how Finella {plans} to use her time.</u>

WEEK 1	
MONDAY	{Read} books about killer whales.
TUESDAY	{Write} list of questions
WEDNESDAY	{Phone} Hyak's trainer and record his answers
THURSDAY	{Make} a graph
FRIDAY	{Make} the folder
SATURDAY	{Visit} Aquarium and take pictures
WEEK 2	
MONDAY	{Write} diary
TUESDAY	{Plan} folder
WEDNESDAY	{Write} folder information
THURSDAY	{Mount} pictures and complete folder
FRIDAY	{Plan} how I'm going to share my project
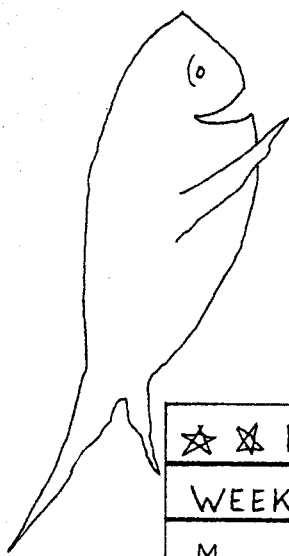
Using your information chart on page 18, _____, make up a time line for your project:

☆ ✗ MY TIME LINE ☆ ✗ Name

WEEK 1	
MONDAY	
TUESDAY	
WEDNESDAY	
THURSDAY	
FRIDAY	
WEEK 2	
MONDAY	
TUESDAY	
WEDNESDAY	
THURSDAY	
FRIDAY	
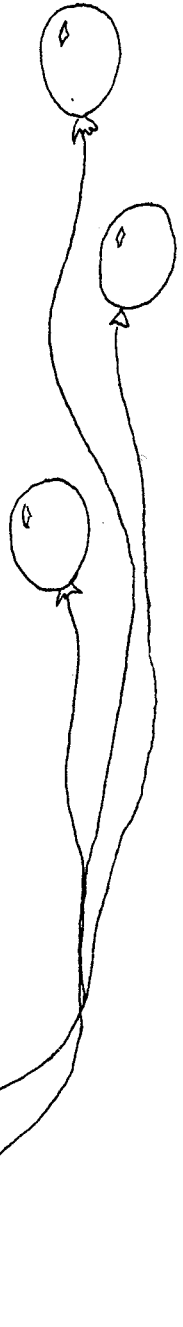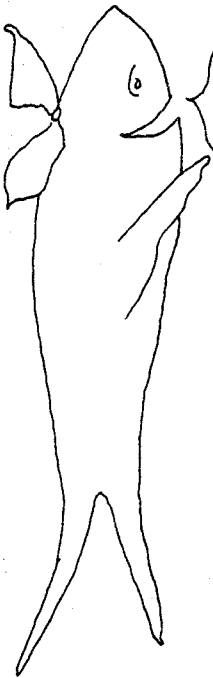
HOORAY!! all done.

Not so fast, Finella. You and _____ have done a super job. In fact, I think you should give yourself a special treat for having done such a good job.

Oh Gooo! Hyak's trainer said he'd let me feed Hyak. I think I'll go and phone him now.

How about you _____? Can you think of a neat thing to do as a reward for your good work?

Write your idea below.

_____

_____

_____

Now get to work on your project. See you in 2 weeks _____.
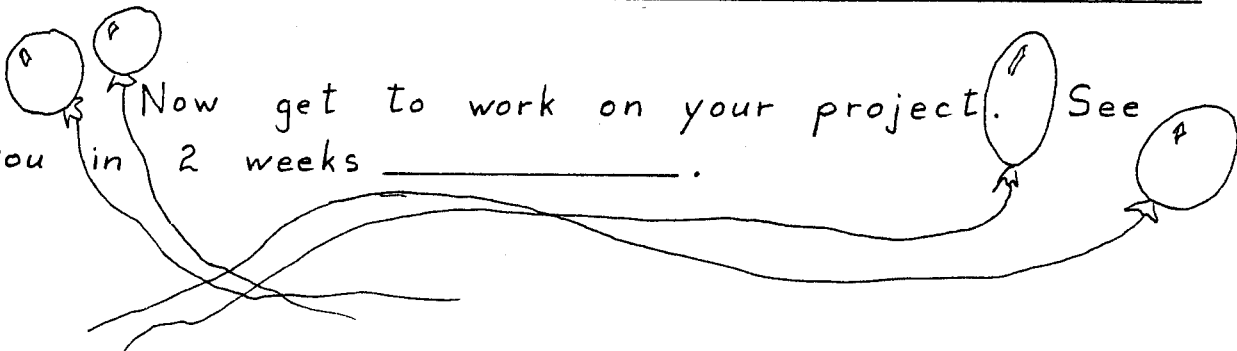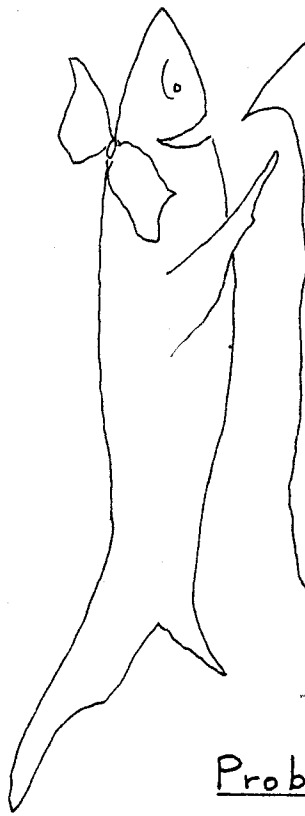
I'm all finished! Whew! That was fun, but, also hard work. There were times when I wasn't sure I'd keep up with the dates on my time line.

How about you _____?
Did you have any special problems? If you did why don't you list them below so you and your teacher can have a talk about them.

Problems I faced:

_____
_____
_____
_____
_____
_____
_____
_____
_____

MONDAY
5

NO GLUE!

The Zoo

SORRY!!
NO ANSWER

CRASH!
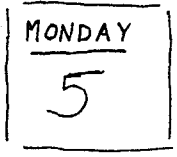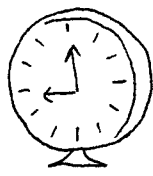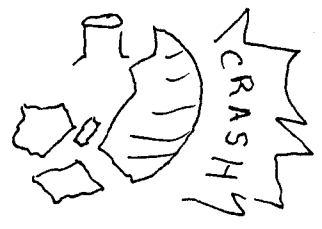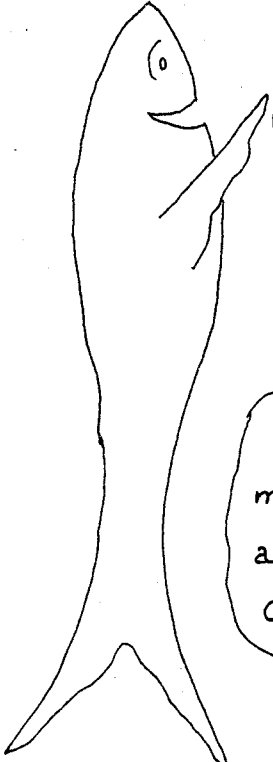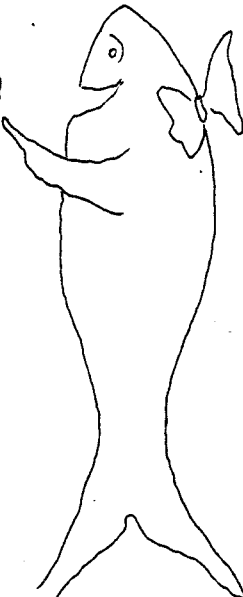
Both you and _____ have worked so hard learning about something new. Why don't you share your new information with some other people?
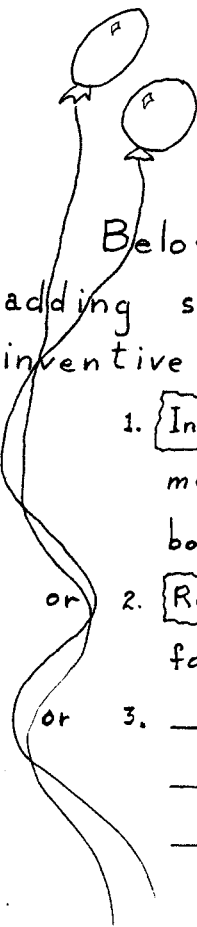
You mean I could invite my friends and tell them about my new experiences? GREAT IDEA !!

<u>Wh</u>at will I tell them?
<u>Wh</u>om will I invite?
<u>H</u>ow can I make it
    exciting?
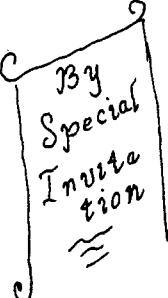
Below are some ideas. <u>Help Finella</u> by adding some more ideas to her list. Be as inventive as you can.

By Special Invitation

1. [Invite] my mom and dad and 2 friends to watch me feed Hyak; and give them each an information booklet when they visit the Aquarium with me.

or 2. [Record] my experiences and do a slide/tape presentation for the class.

or 3. _____

   _____

   _____
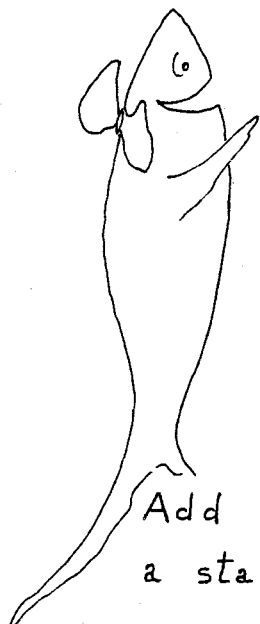
Now that you have the idea choose a way of sharing your project in a really new and different way.

Here are some more suggestions. Add more ideas to the list. Then put a star beside the one you wish to do.

Sharing Ideas

Sally is invited to
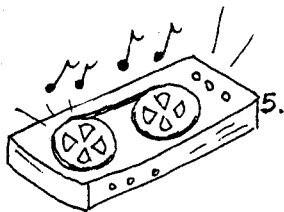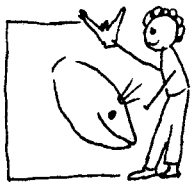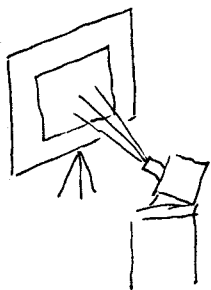
1. Send special invitations to friends. Show them pictures of the animal in my project. eg. whale, horse, cat, insect.
2. Have a party. Play games I made up related to my project. eg. Pin the tail on the whale; word search; charades.
3. Make up a set of "overheads" about my project. Play a tape I recorded describing the project.
4. _____
   _____
   _____
5. _____
   _____

CONGRATULATIONS!

FINNY

and

FINELLA

GUIDE

_____

to
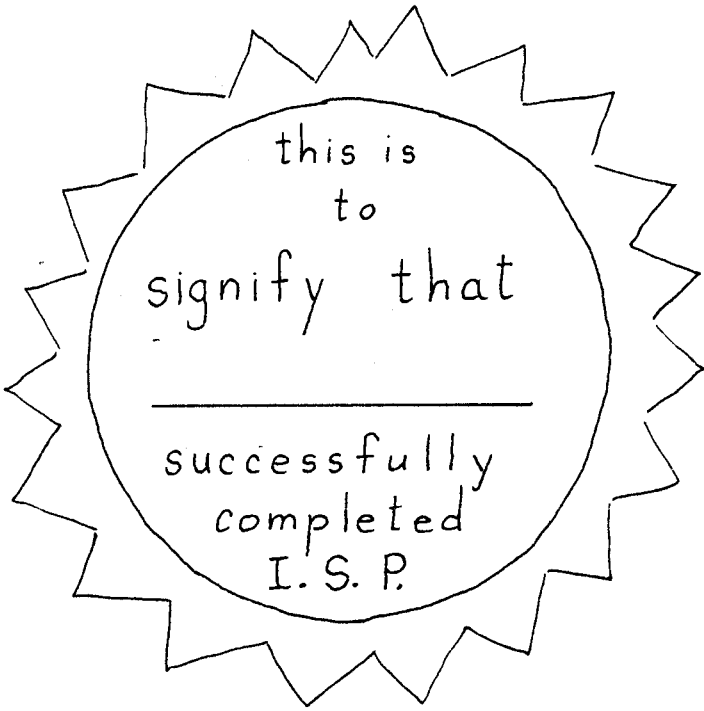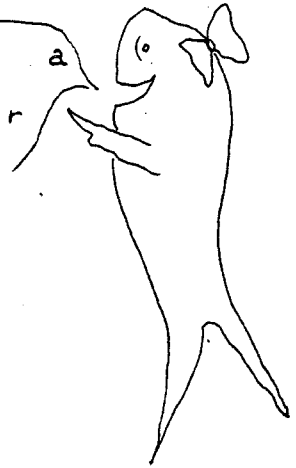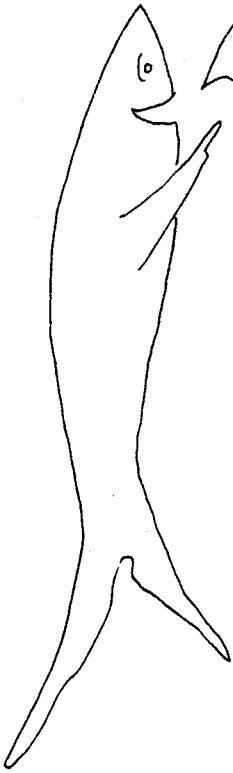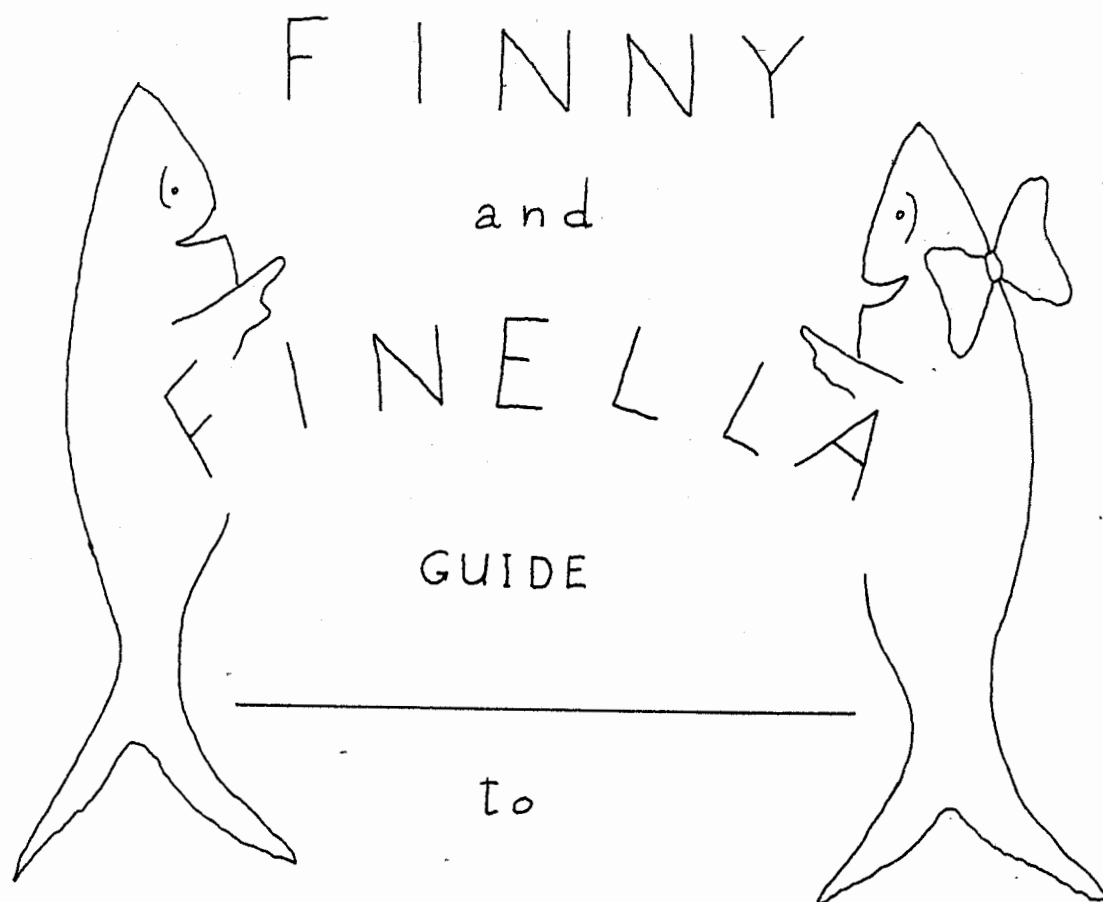
complete   an

INDEPENDENT

STUDY   PROJECT

written   by   Frieda   H.   Ashworth

PART   III
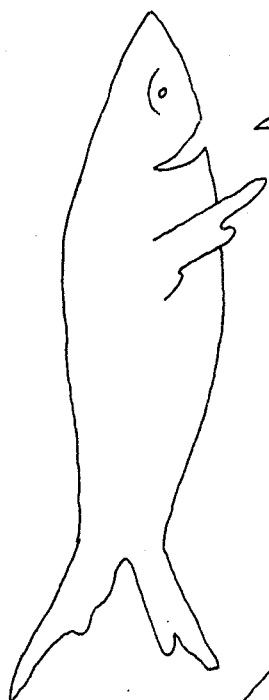
We hope you now feel

READY

to begin your own

INDEPENDENT STUDY

PROJECT, _____.

In this booklet you will learn how to complete a study project entirely on your own.

This booklet will STEP by STEP help you plan and complete a project on a topic that you will choose.
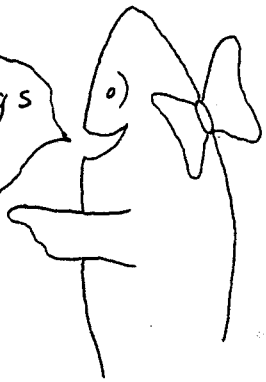
Are you ready to begin, _____?
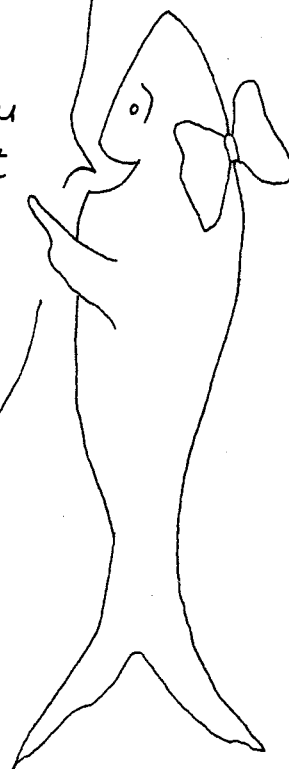
YOU learned a lot of new skills in the PLANNING booklet.

But what about some of the skills that YOU have to develop yourself in order to complete a project successfully.

What kinds of things are you talking about, Finny?

Finny is talking about things such as:

Self Confidence - that means you believe in your own ability to do things well.

Self Discipline - that means you can stick to something until it is completed.

These are skills you CAN learn. Finny and Finella will help you.

2
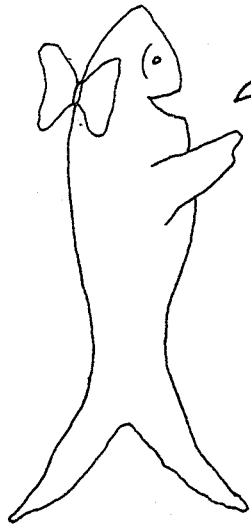
> But, Finny, what if I make a mistake and something doesn't turn out the way I planned it.

> Everybody makes mistakes, Finella. The important thing is to try not to make the same mistake twice.
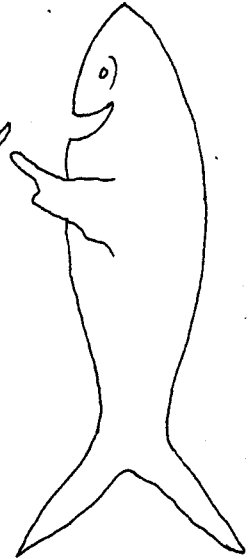
Remember:

1. It's <u>normal</u> for you to make mistakes. But, remember that you must always try to learn from your mistakes.

2. And don't forget there's <u>nothing wrong with asking</u> someone for help when you run into a problem.

What do we have to do first, Finny? I want to get started, don't you _____ ?

The first thing to do is to choose an area you wish to learn more about.
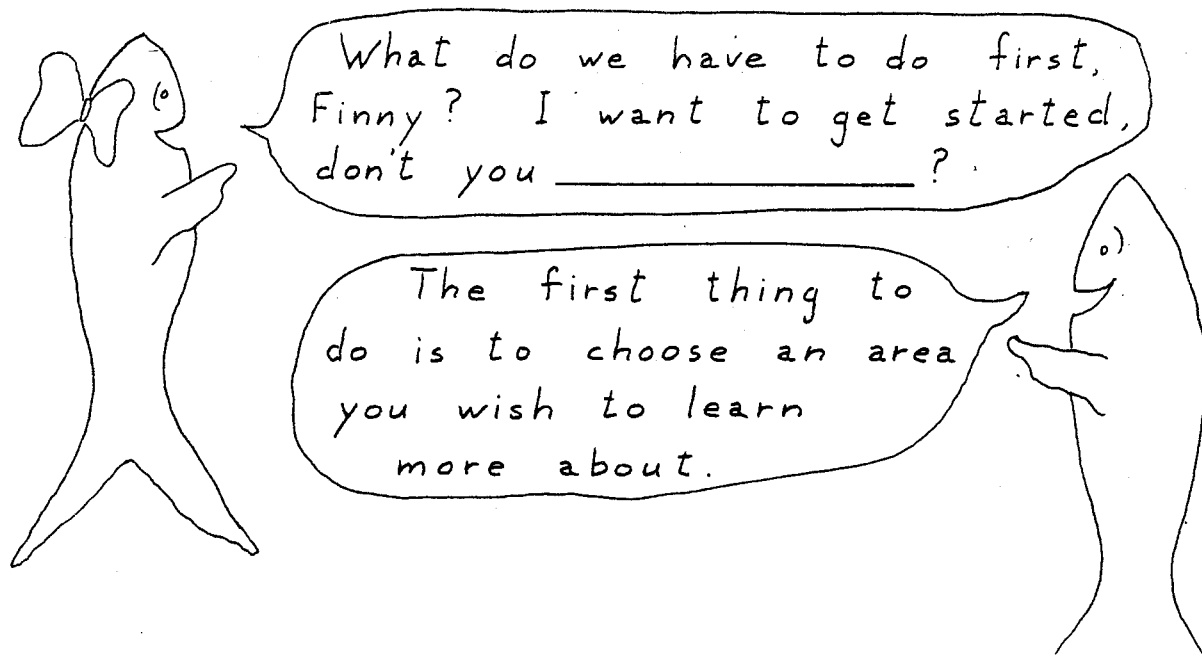
CHOOSING A TOPIC

? Here are some questions to ask yourself before you decide.

1. What is something NEW I could learn about?
2. What question is in my mind that I really want an answer for?
3. What would I like to learn to DO that I've never done before?
4. Could I {invent / build} something new?

⊛ What other question could you ask?

_____

_____

What will I choose?

Music

ART

SCIENCE

insects trees paper-

rocks

animals space

SPORTS
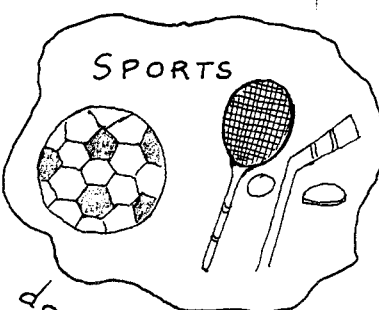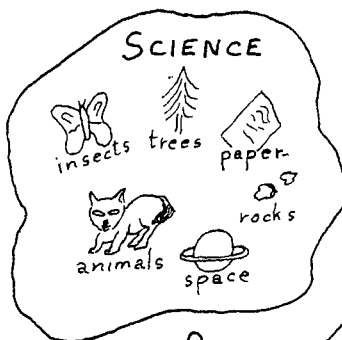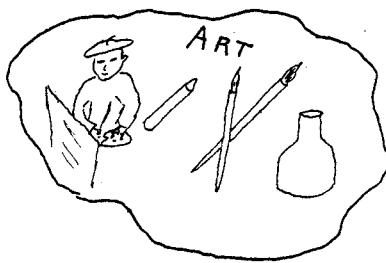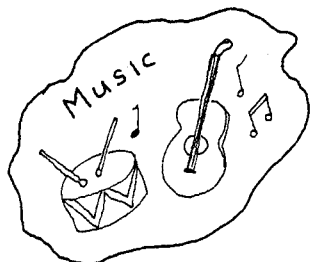
computers?

crafts?

sculpture?

cars?

drama?

dance?

film making?

dog training?

making a newspaper?

⊛ **Add** as many things as you can to the things listed above.

_____   _____   _____

_____   _____   _____

_____   _____   _____
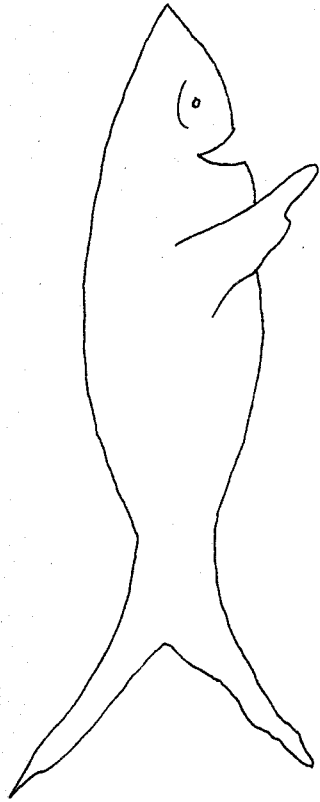
Now it's your turn _____.

⊛ List as many things as you possibly can that you MIGHT be interested in.

_____   _____
_____   _____
_____   _____
_____   _____
_____   _____
_____   _____
_____   _____
_____   _____

⊛ Choose your three top choices from the list

_____
_____
_____

⊛ Now place 3 stars (�) beside your first choice, 2 stars (✗✗) beside your second choice and 1 star (✗) beside your last choice.

You may wish to refer to page 5 in the planning section.
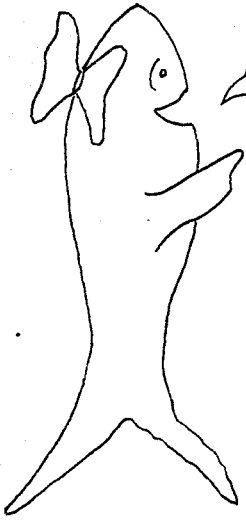
Now that you have chosen a topic place the name of your **TOPIC** in the space below.

MY TOPIC:_____

Signed_____
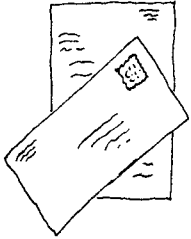
BOOKS I can read about my topic

_____

_____

A PERSON I can ask about my topic

_____
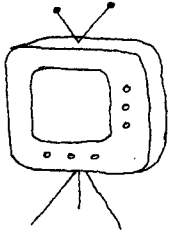
A FILMSTRIP or **T.V.** show about my topic

_____

OTHER PEOPLE or **PLACES** I can get information about my topic

_____

_____

☆ Don't forget to ask your teacher, parents, fellow students, etc. for help.

SETTING A GOAL
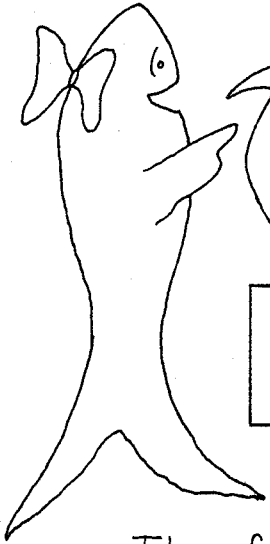
Ask yourself the question:
What do I want to learn
about or do?

Go back to page 9 of the planning
booklet if you need help.

The following suggestions might also help you:

1. I want to learn how to make a filmstrip on dinosaurs.

2. I want to learn as much as I can about training dogs for the blind. I'd like to meet one.

3. I want to learn as much as I can about frogs. I'd like to hatch frogs and observe how they grow.

Now write your goal.

MY GOAL: _____

_____

_____

_____

CHOOSING A PRODUCT
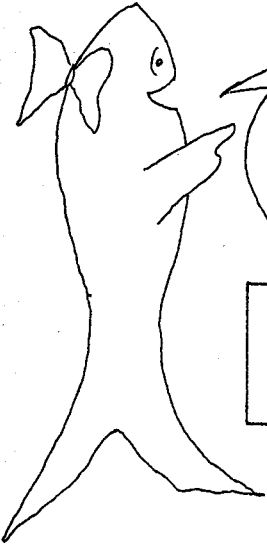
Ask yourself the question: What will my finished project be?

✱ Go back to pages 10 to 13 of the planning booklet if you need help.

The following suggestions might also help you:

1. Filmstrip and tape
2. Cartoon booklet
3. Model with charts
4. Story or poetry booklet
5. Computer program

✪ Now write your product.

MY PRODUCT: _____

_____

_____

_____

Planning My
PROJECT ACTIVITIES
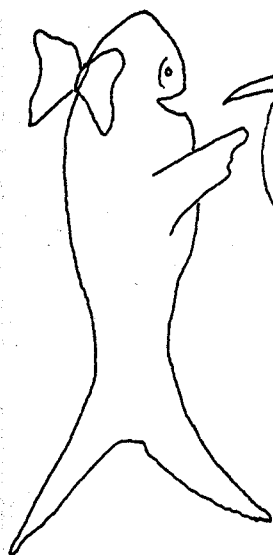
Ask yourself the question:
What activities will I need to
do to achieve my goal and
complete my project?

* Go back to pages 14 to 18 of
the planning booklet if you need
help.

The following words might help you:

1. Read
2. Write
3. Draw
4. Make
5. Visit
6. Watch
7. Interview

On the following page write down all
the activities you will need to do in
order to complete your project.

REMEMBER: There is nothing wrong with asking for help!

MY PROJECT ACTIVITIES

All the things I need to do to achieve my goal and complete my product

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

Now you are ready to complete the following project plan. Get the information from the pages you have just completed.

PROJECT PLAN

TOPIC: (see page 7) _____

_____

GOAL: (see page 8) _____

_____

_____

PRODUCT: (see page 9) _____

_____

PROJECT ACTIVITIES: (see page 11)

_____

_____

_____

_____

_____

_____

_____

_____

_____

Planning a
TIME LINE
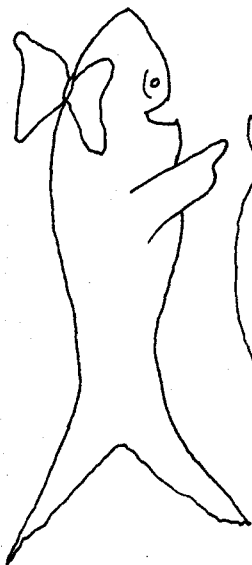
Ask yourself two questions:

⊛ In what order will I do the activities?

⊛ By what date must the project be completed?
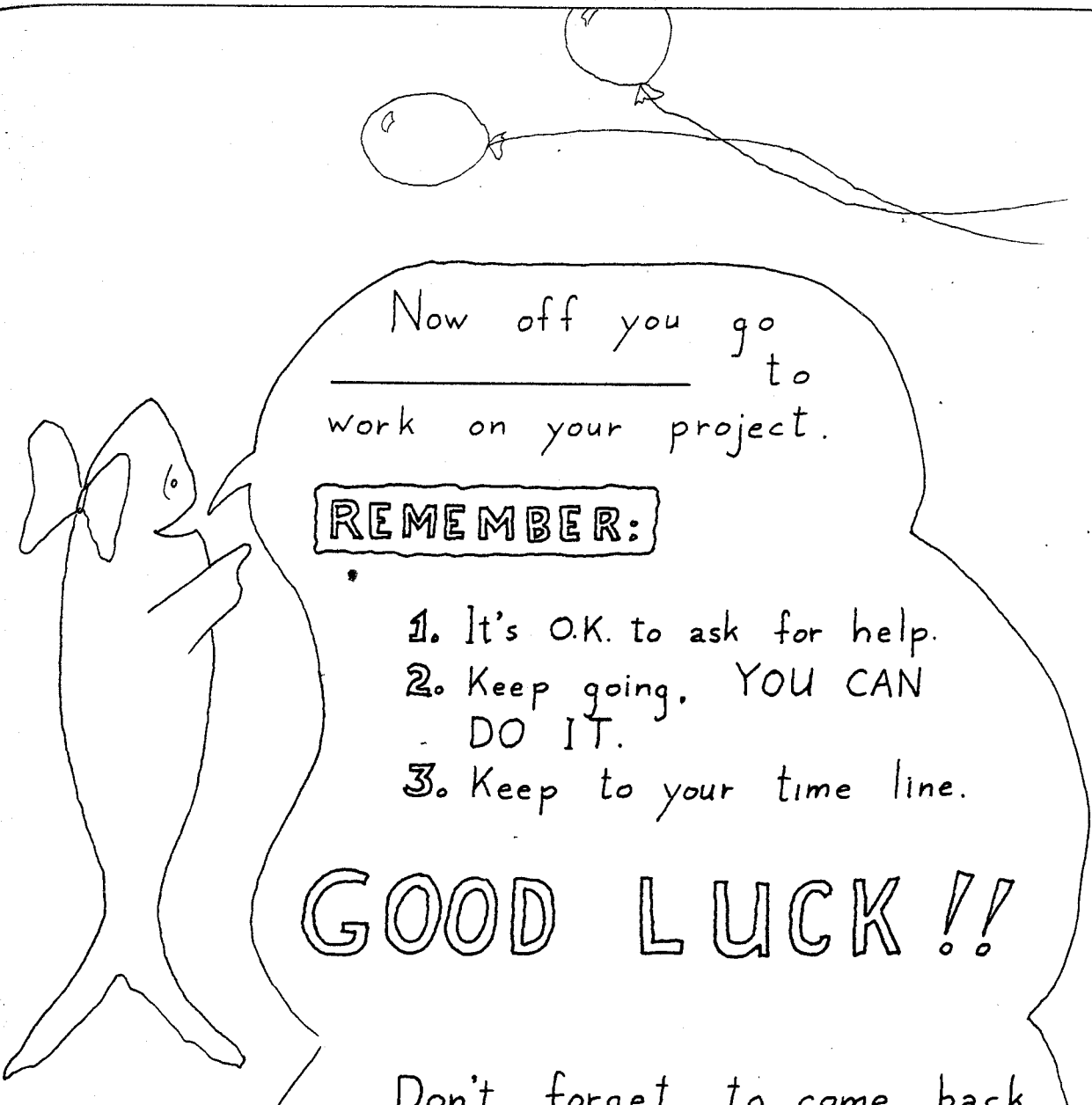
✗ Go back to page 21 of the planning booklet if you need help.

MY TIME LINE

Name:

WEEK 1	
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
WEEK 2	
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

The following page has more space if you need more time to complete your project.

WEEK 3	
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
WEEK 4	
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

GOOD LUCK!

Now off you go
_____ to
work on your project.

REMEMBER:

1. It's O.K. to ask for help.
2. Keep going. YOU CAN DO IT.
3. Keep to your time line.

GOOD LUCK!!

Don't forget to come back to see me on page 16 when you have finished your project.
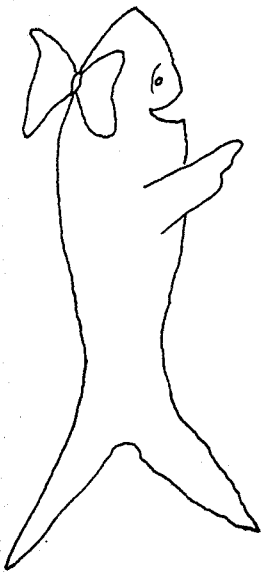
I bet you feel GREAT now that you're all finished. But, I bet there were some PROBLEMS you faced as you went along.

In the space below list any problems you had while completing the project.
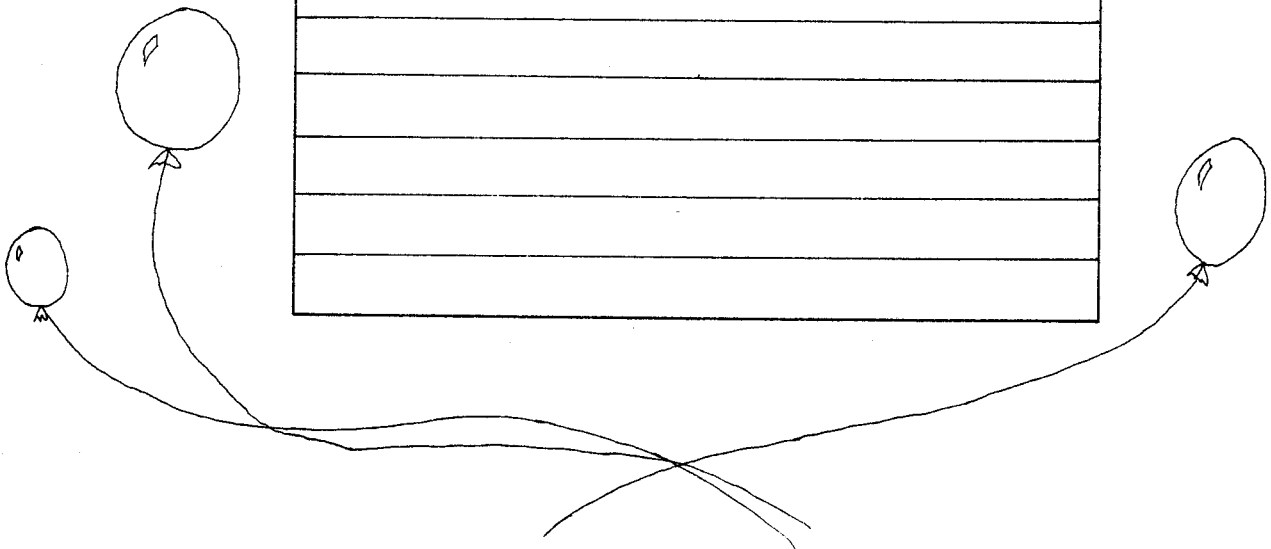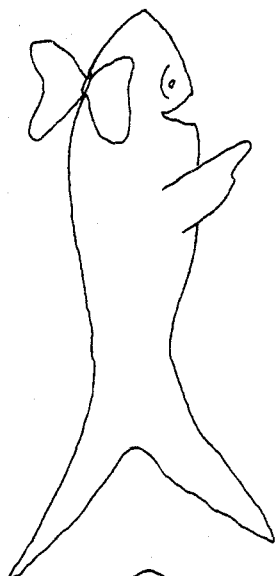
You must be very proud of the great job you've done. How about sharing what you've done with some of your favorite people,_____.

⊗ Ask yourself the questions:
   What will I tell them?
   Whom will I invite?
   How can I make it exciting?

✳ Go back to page 25 of the planning booklet if you need help.

Sharing My Project
What I will do
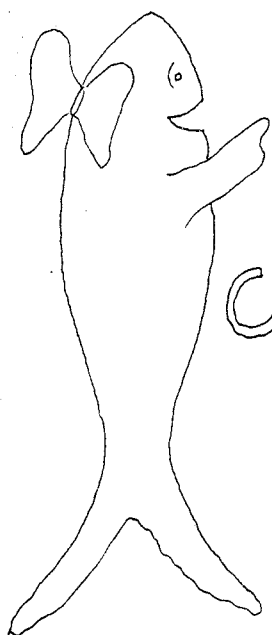
CONGRATULATIONS

_____
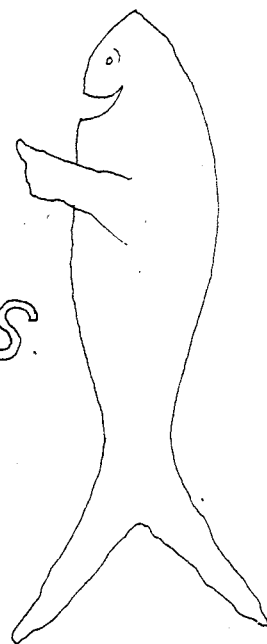
Both
Finny and Finella
want you to plan a
SPECIAL TREAT
for yourself for having
completed a project on your very own.
You might wish to share
the experience with your mom
and dad or best friend.
Be sure to have
a
WONDERFUL TIME

You DESERVE it _____

APPENDIX B

FINNY AND FINELLA

Second Revision

FINNY

and

FINELLA

a

Self-Directed

Learning Activity

by Frieda H. Ashworth

Simon Fraser University

A Challenge Education Activity

In this booklet you will learn to PLAN an independent project.

Finny and I will help you with every step of the planning.

Remember:

1. **T**ake plenty of time. Work at your own speed.
2. **R**ead carefully. Everything is important.
3. **W**ork on just one page at a time.
4. **D**o not jump ahead. Never go ahead to the next page until you are finished the one you are working on.
5. **Y**ou may go back and re-read pages that you have already done.
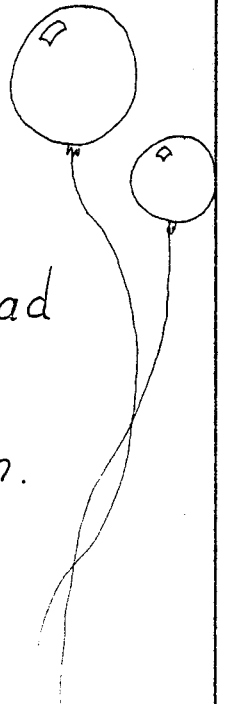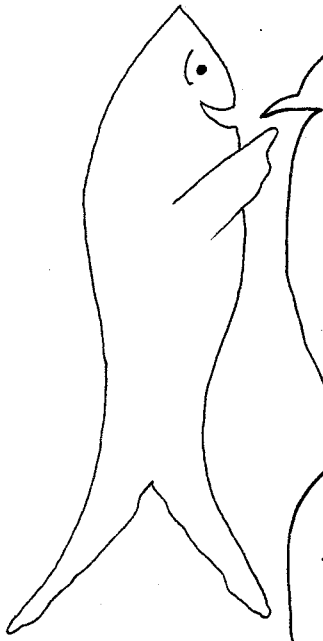
In this booklet you will do a project about animals. Finella is doing a project on whales so she will help you.

How did you decide to do your project about whales, Finella?

Well, first I made a list of all the animals I'd like to learn about. Like this:

1.	bears
2.	whales
3.	tigers
4.	rabbits
5.	snakes
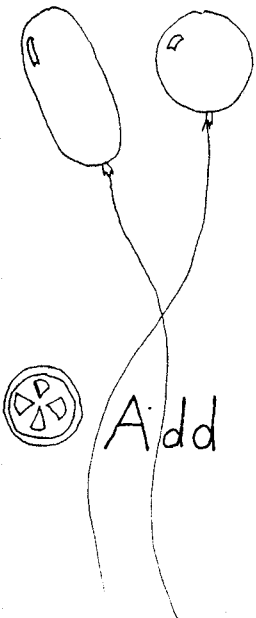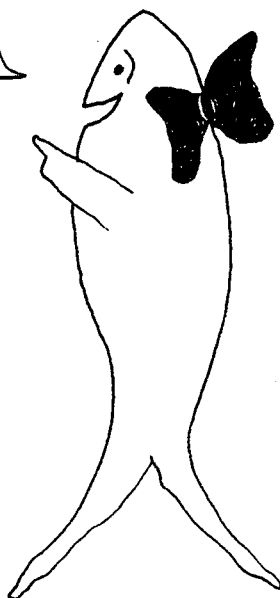
Add some animals you are interested in

6.	
7.	

Now you are ready to think about a topic. Read the list carefully, Finella. Choose three animals that interest you most.

Place a star beside the one you like best.

Oh, I see. Is this how you do it, Finny?
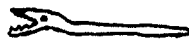
alligators
whales ☆
sharks

One way for you to decide on a topic is to check out all the places you can get information.

1. **C**heck the library for a book to read.
2. **F**ind a person to talk to who knows about the topic.
3. **C**heck the T.V. Guide for shows on the topic.
4. **A**sk the teacher about films or filmstrips.

O.K. Finny. I'll check for resources for whales.
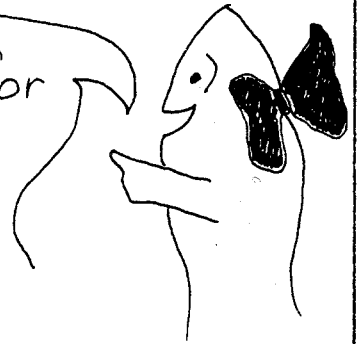
1. A book I could read is...
   "Whales" by Marvin Black

2. A person I could talk to is...
   The man who feeds whales at the aquarium

3. There's a show on T.V. called....
   Save The Whales

4. There's a filmstrip about whales called....
   Our Largest Mammals

I could also write to the "GREEN PEACE SOCIETY". They try to save the whales from being killed.

Now it's your turn,

_____ .
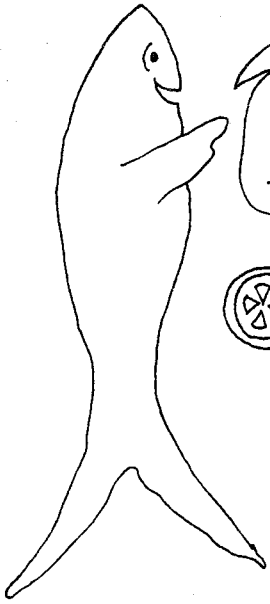
1. **C**hoose 3 animals from your list on page 2.

_____

_____

_____
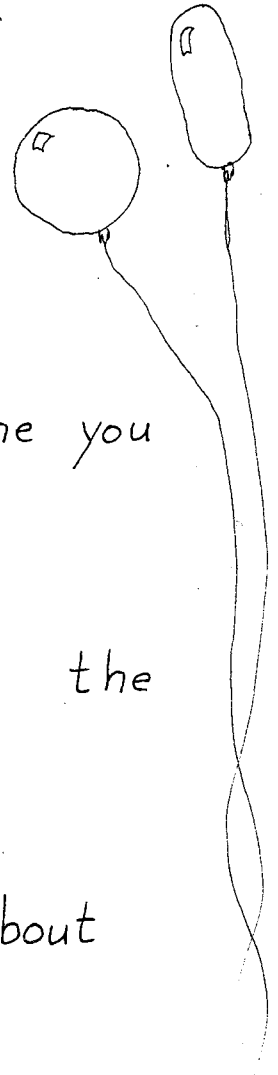
2. **P**lace a star beside the one you like best.

3. **C**heck for information about the animal you chose.

Books I can read about
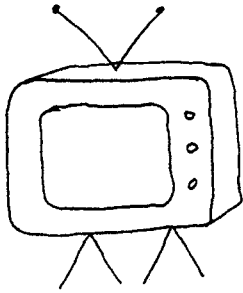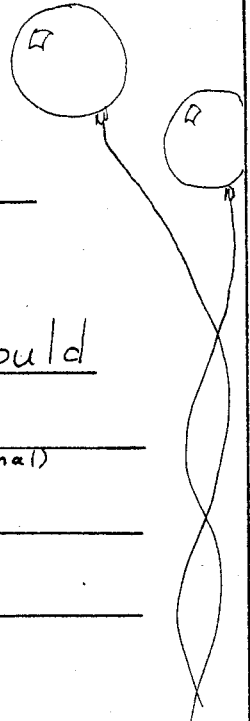
_____
(name of animal)

_____

_____

_____

_____

ALL ABOUT

5

A person I can talk to about _____
(name of animal)

_____

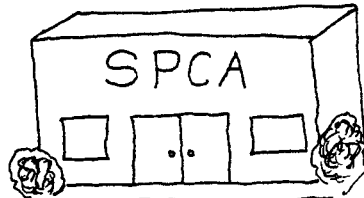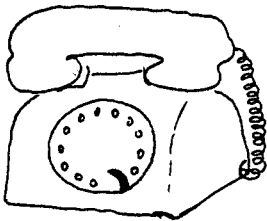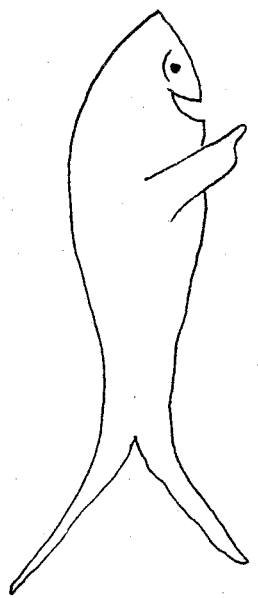A T.V. show or place I could visit to learn about _____
(name of animal)

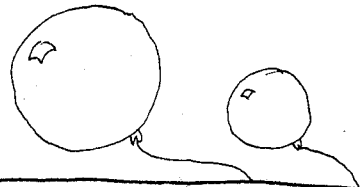_____

_____

A filmstrip or movie I could see about _____
(name of animal)

_____

_____

Other people or places where I can get information
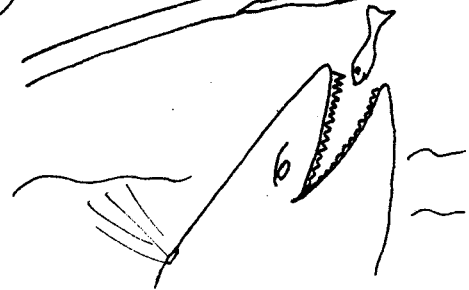
_____

_____

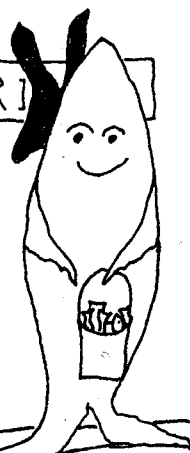_____

_____

The Zoo

NEWS!

OWL magazine

SPCA
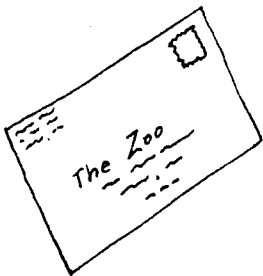
Now that you have chosen a topic, Finella and _____, it's time to set a _goal_ for your project. What's your _goal_ Finella?

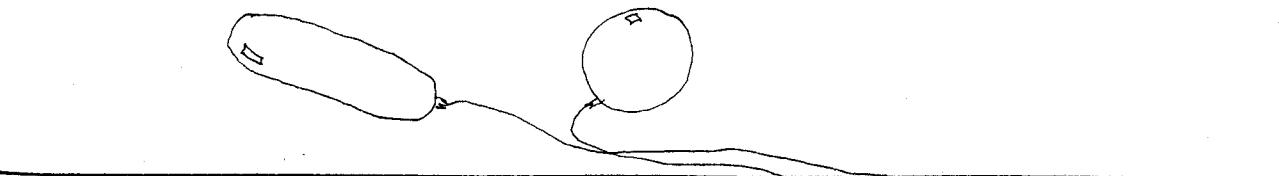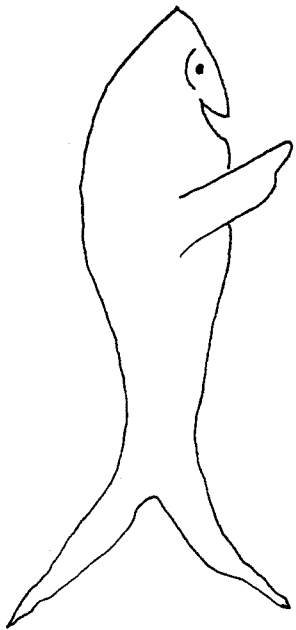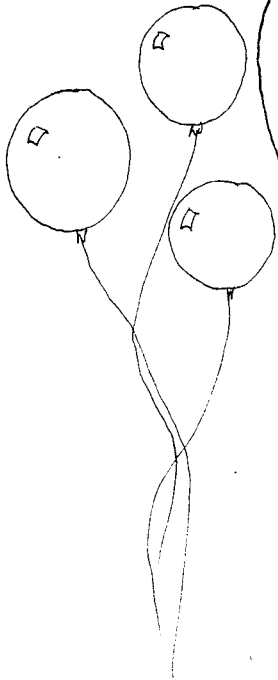I want to learn as much as I can about Killer Whales.
What's your _goal_ _____ ?

AQUARI

NEXT FEEDING

My Topic : _____

My Goal : _____

_____

_____

What are you going to choose as a final **_product_** for your project, Finella?

I don't know Finny. I could make a booklet with information, pictures and diagrams; or a model with charts.......
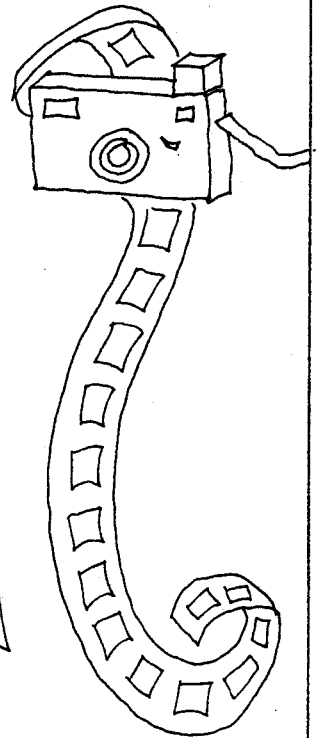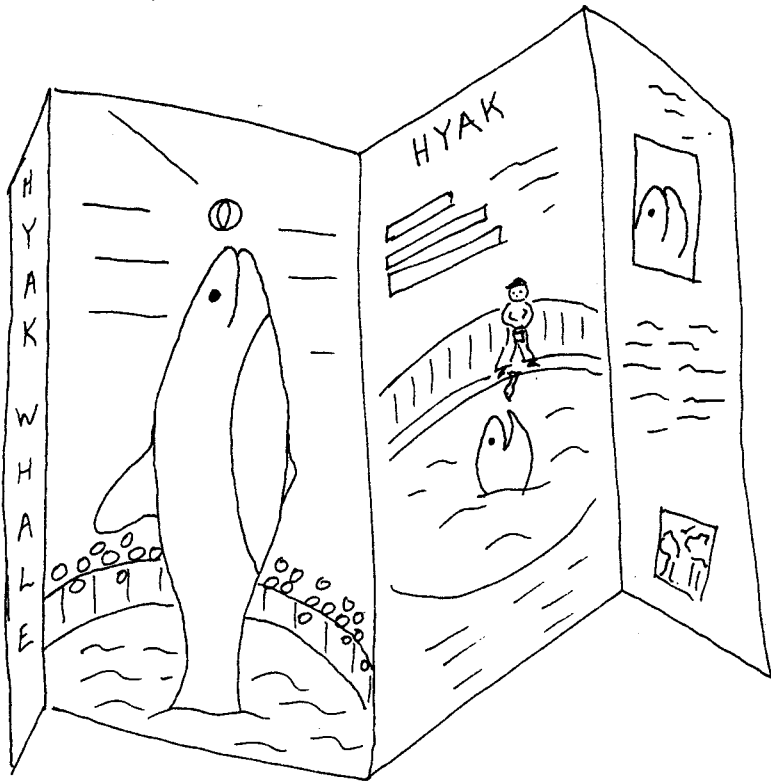
I know! I'm going to make an information folder for people who come to see Hyak.

I'm also going to use my camera to take pictures of Hyak to include in my folder.

GREAT IDEA! Finella.

HYAK WHALE

HYAK

I wonder if Hyak's trainer would let me help with the feeding one day? I think I'll ask him.

9
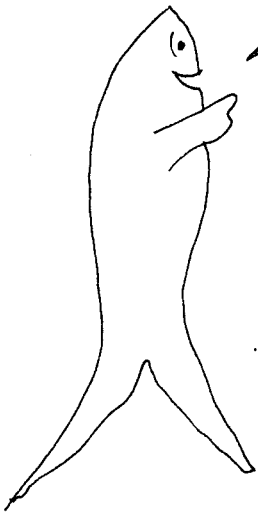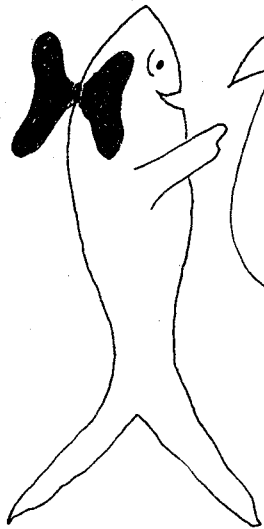
What about you _____?
Have you made a decision
yet about your **product**?

Here are some things to
think about before you decide.
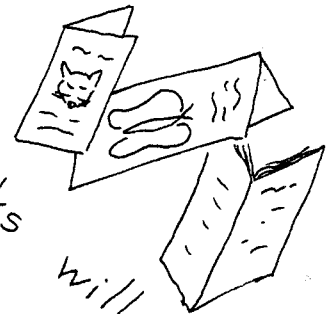
<u>What</u> books will I read?

<u>What</u> equipment will I need?

<u>Who</u> will I ask for information?

<u>Where</u> will I get my supplies?

<u>What</u> other sources can I use to get information?
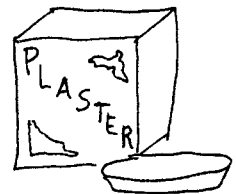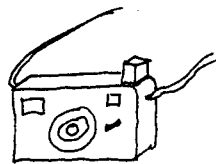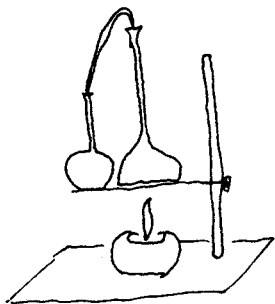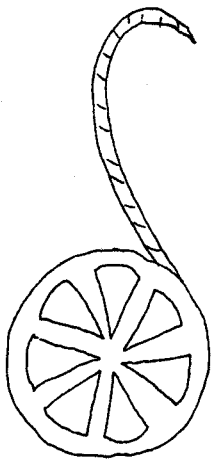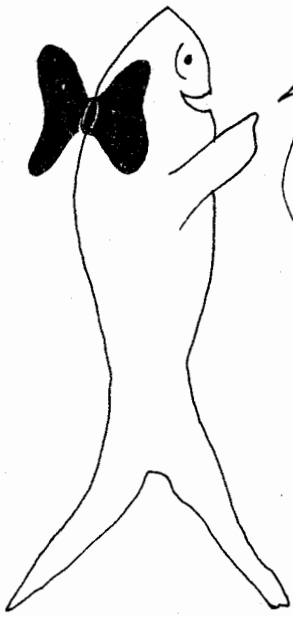
Let's help _____ by starting a list of **products**.

O.K. Finella. Here goes!
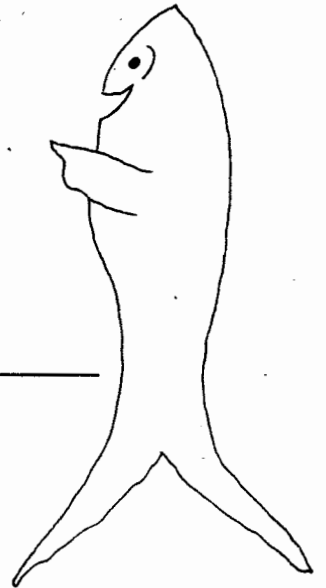
LIST OF PRODUCTS

1. Story book
2. Puppet play
3. Clay model
4. Calendar

Add more products to the list

5.
6.
7.

Place a star beside the one you are going to do

Write your product in the space below

My product is _____

Time to **PLAN** all the things I need to do to complete my product.

Make a list of all the things you will need to do Finella.

Here is Finella's **PLAN**

	FINELLA'S PLAN
1.	Read books about whales
2.	Write questions to ask Hyak's trainer
3.	Phone Hyak's trainer
4.	Take pictures of Hyak
5.	Make a folder.
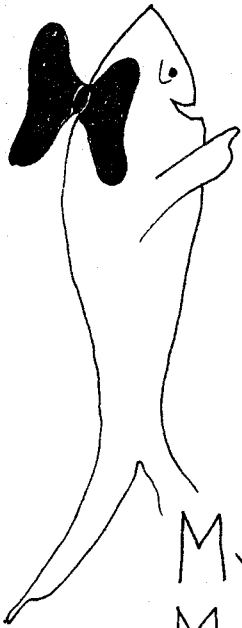
Now it's your turn to PLAN, _____. Write a list of things you have to do to complete your project.

My Topic _____

My Product _____

My Plan	

Now think of all the materials you will need. Make a list on the next page.

wool

CLOTH
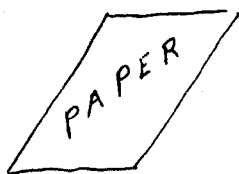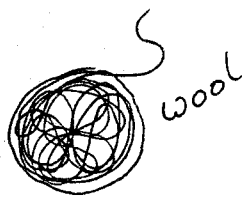
Materials I will
need to make
my **product**

PAPER

GLUE

clay

TAPE RECORDER

BOOKS
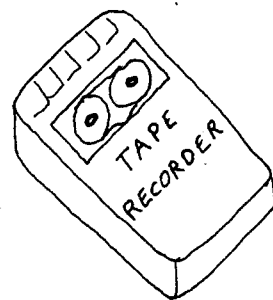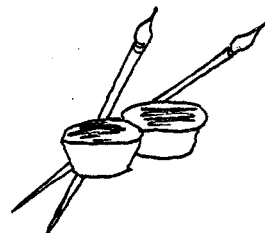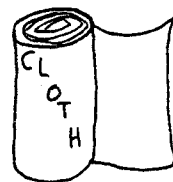
Now that you have planned so
carefully, write all your
plans on the next page so
that you can see everything
that you are going to do.
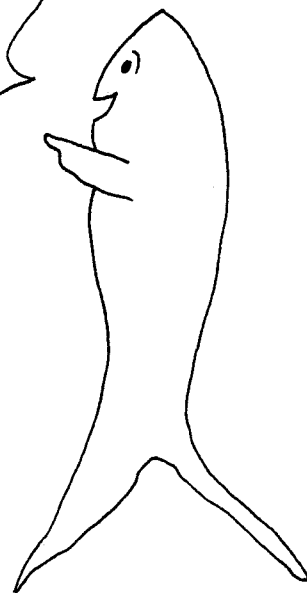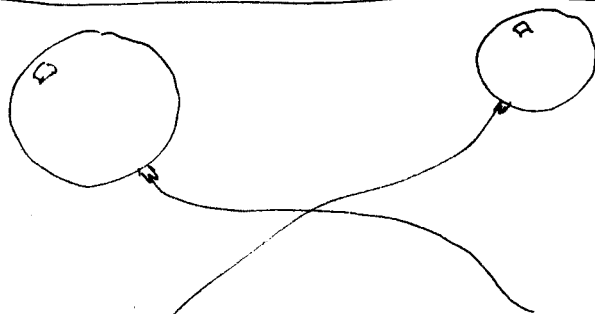
✵ ✵ ✵ MY PROJECT PLAN ✵ ✵ ✵

Name:

Topic: (see page 5)

Goal: (see page 7)

Product: (see page 11)

Things I need to do:

Materials I will need:

How will you know how long to work on your project, Finella?

I'll make a **TIME LINE**, Finny.
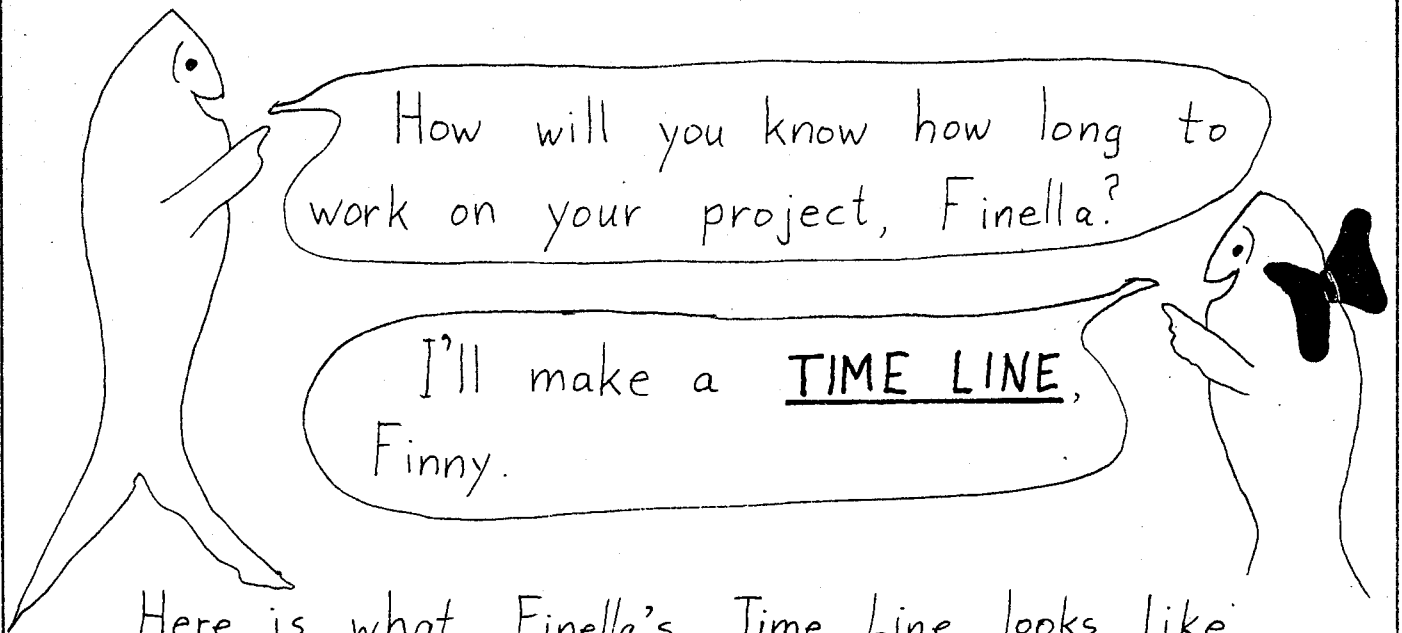
Here is what Finella's Time Line looks like. She has put down everything she will do each day.

FINELLA'S TIME LINE	
Week 1	
Monday	Find books and make notes about whales
Tuesday	Write questions to ask Hyak's trainer
Wednesday	Phone Hyak's trainer
Thursday	Take pictures of Hyak
Friday	Make my folder and draw pictures in it
Week 2	Weekend- Ask my dad to take pictures to be developed.
Monday	Put information in my folder
Tuesday	Put pictures in my folder
Wednesday	Colour the pictures I drew in my folder
Thursday	Plan my sharing activity
Friday	Share my project with the class

Now it's your turn to set up a Time Line, _____.

MY TIME LINE

Name:	
Week 1	
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Week 2	
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Now you are ready to begin your project, _____.

GOOD LUCK !
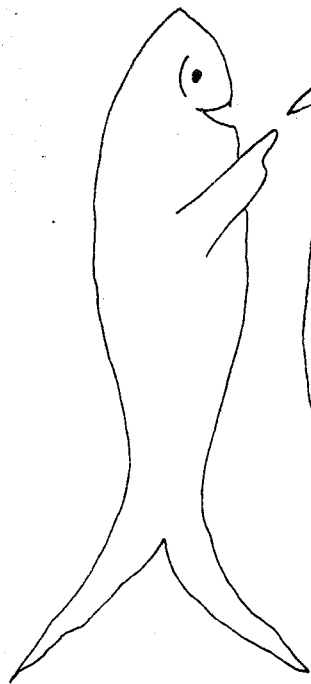
Both you and _____ have worked so hard learning about something new, Finella. Why don't you **share** your new information with some other people?
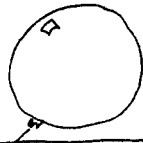
You mean I could invite my friends and tell them about my project? GREAT IDEA!!
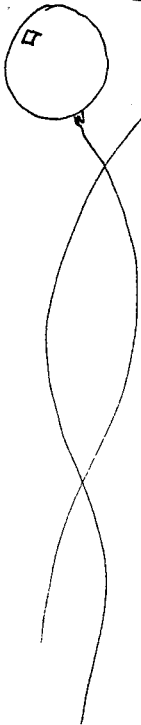
What will I tell them?

Whom will I invite?

How can I make it exciting?

Here are some ideas. Help Finella by adding some more ideas to her list. Be as inventive as you can.

1. **I**nvite my mom and dad and 2 friends to watch me feed Hyak; and give them each an information booklet when they visit the aquarium with me.

By Special Invitation
~ ~ ~
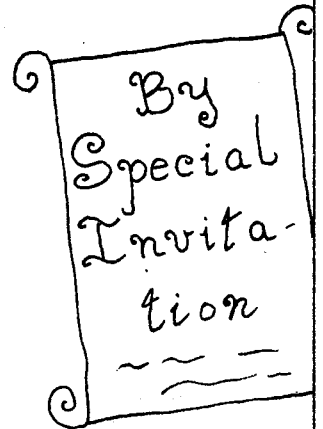
2. **R**ecord my experiences and do a slide/tape presentation for the class.
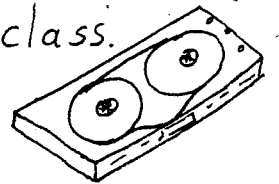
3. **P**ut on a play for the class.

4. **S**how my project and tell about it.

5. _____

6. _____

7. _____

Now choose one of the above ideas and PLAN to share your project.
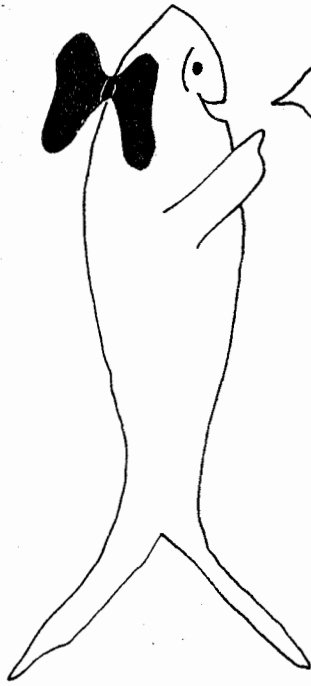
I'm all finished! Whew! That was fun, but, also hard work. There were times when I wasn't sure I'd keep up with the dates on my time line.

How about you _____? Did you have any special problems? If you did, why don't you list them below so you and your teacher can have a talk about them.

Problems I faced:

_____
_____
_____
_____
_____

NO GLUE!

The Zoo
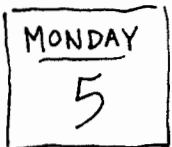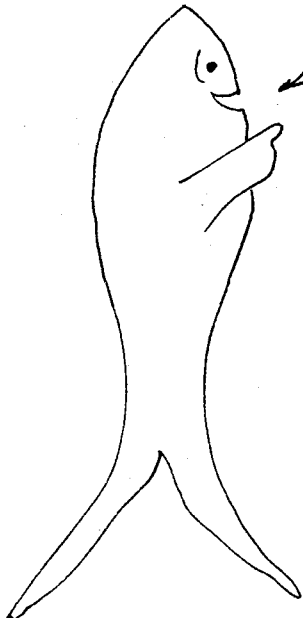
SORRY No ANSWER

CRASH

APPENDIX C

FINNY AND FINELLA

Third Revision

FINNY
and
FINELLA

a
Self-Directed
Learning Activity

by Frieda H. Ashworth

Simon Fraser University

A Challenge Education Activity

In this book you will learn how to do a project all by yourself.
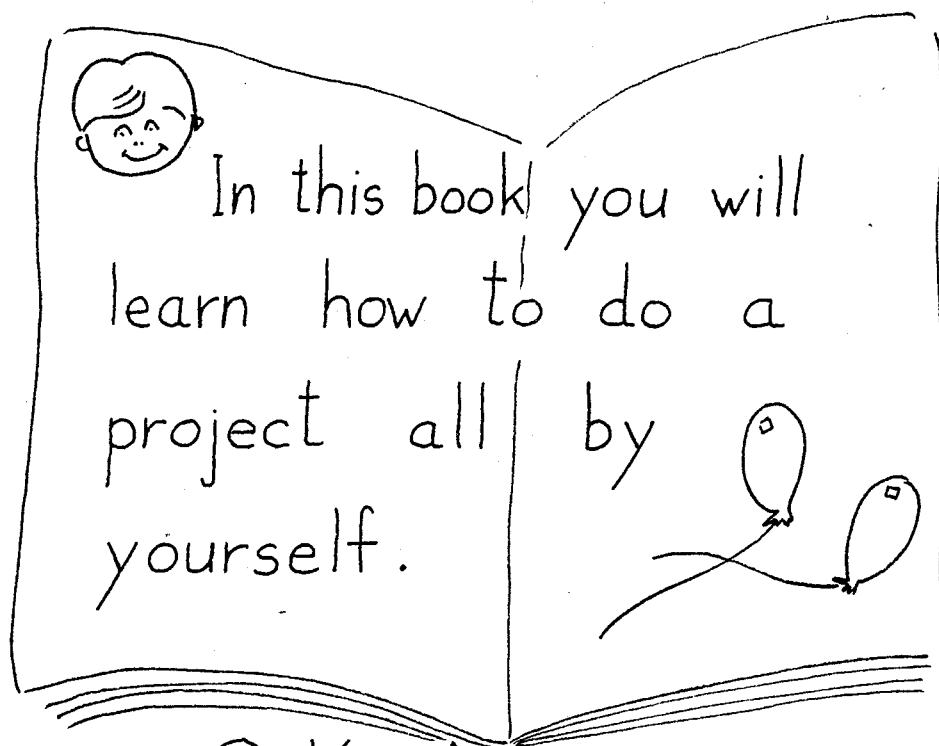
O.K. Are you ready, _____?

Come along and see.

The first place you will visit is the Zoo, so that you can meet your helpers.
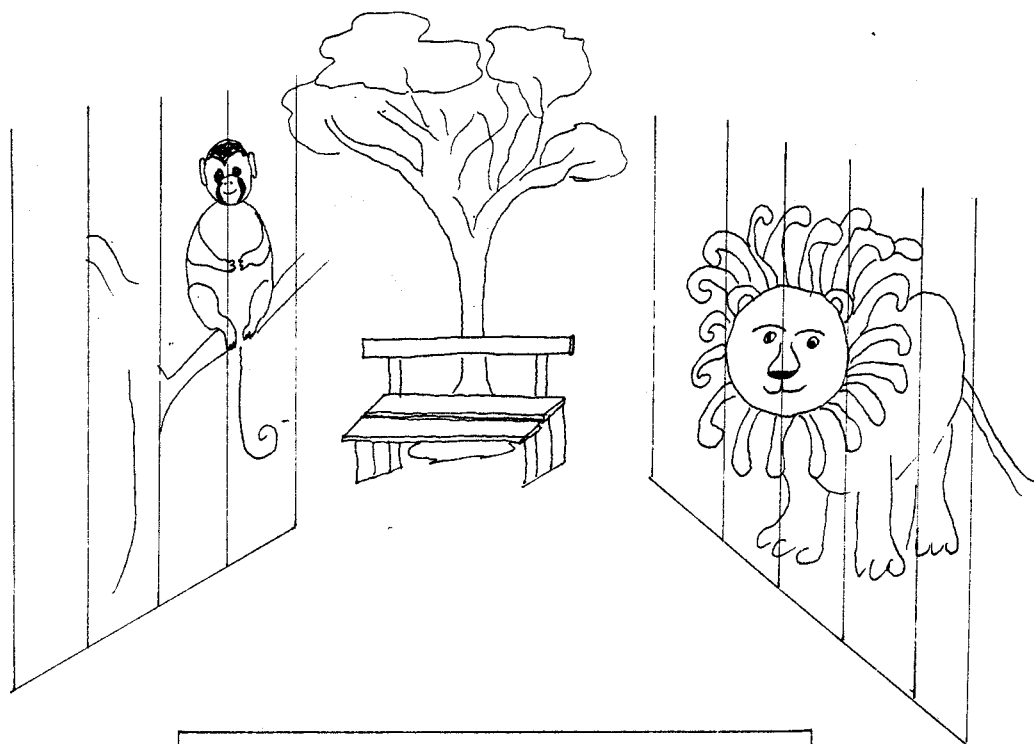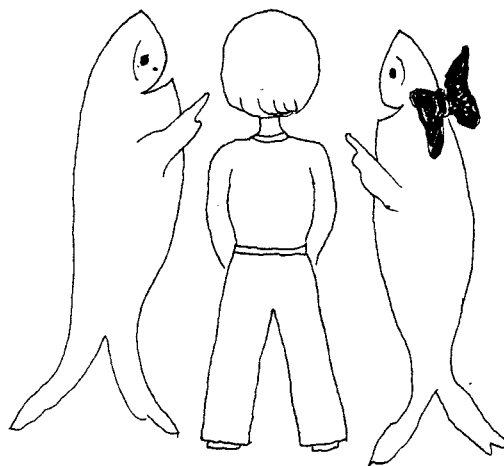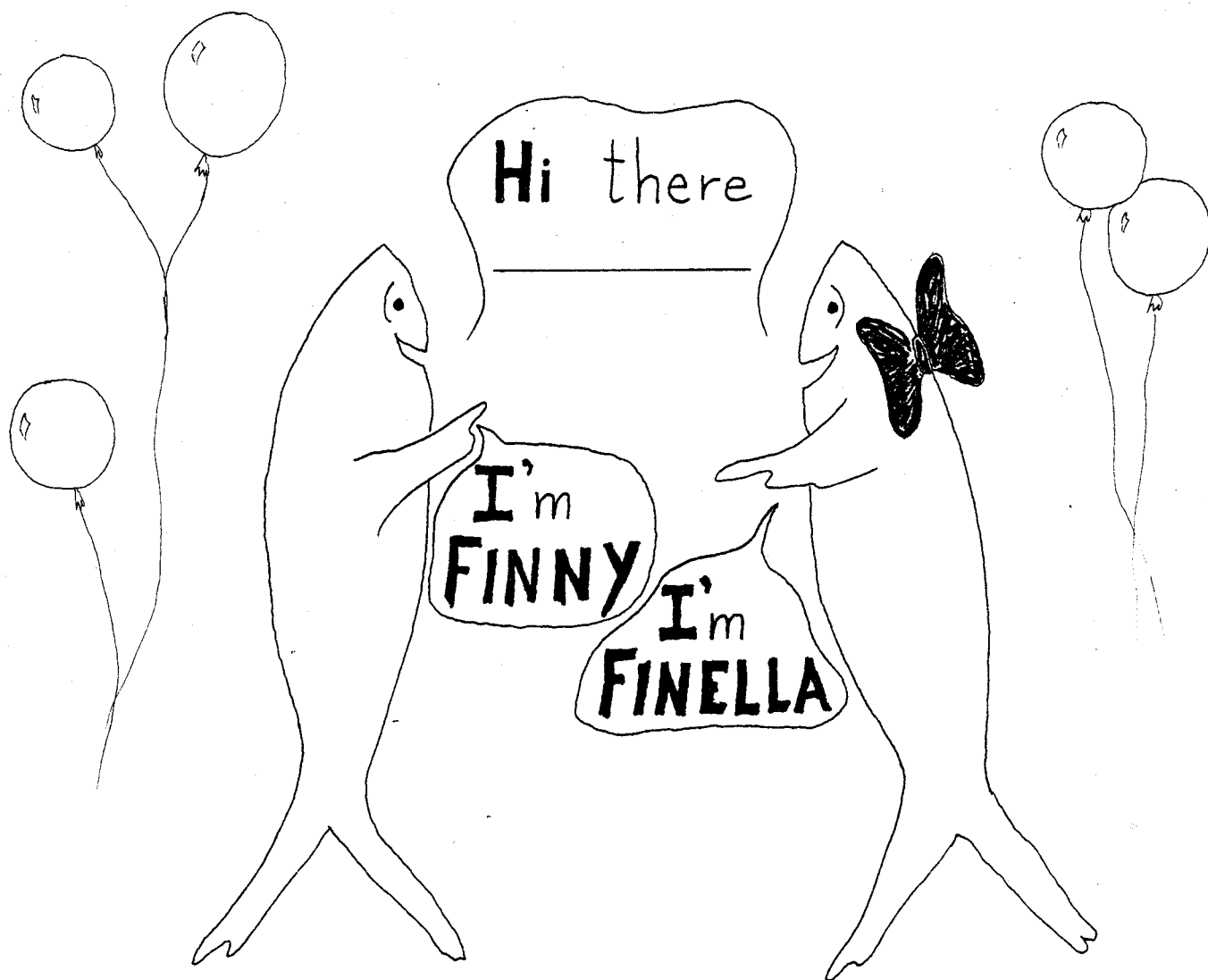
Hi there

_____

I'm **FINNY**

I'm **FINELLA**

You have probably already guessed that Finny and Finella belong to the fish family. And as you know that most fish live in "schools" they must be very smart.
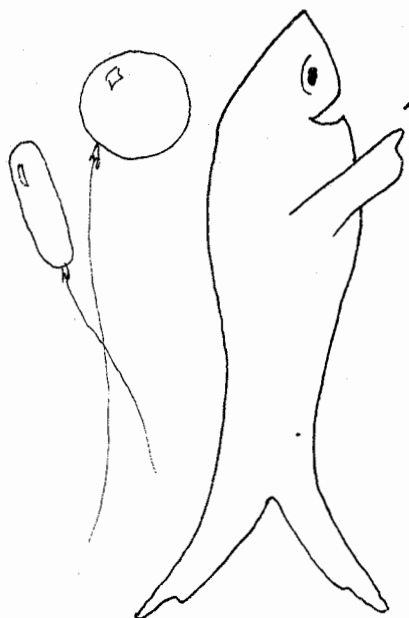
Before we start we'd like you to read this page very carefully.

Finny and I will help you.

Remember:

1. <u>Take</u> plenty of time. <u>Work</u> at your own speed.

2. <u>Read</u> carefully. Everything is important.

3. <u>Work</u> on just one page at a time.

4. <u>Do not</u> jump ahead. Never go ahead to the next page until you are finished the one you are working on.

5. <u>You may go back</u> and re read pages that you have already done.

☆ <u>Read</u> number 4 again.

<u>Now</u> you are ready to begin.

4
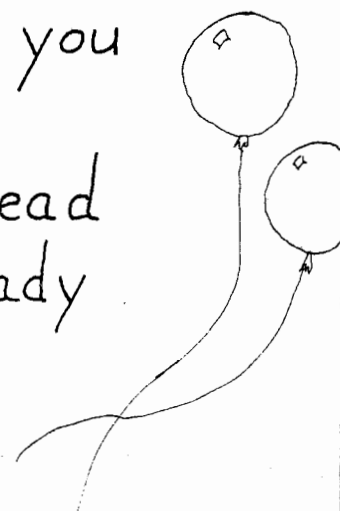
Have you ever done a project by your-self, Finny?

Yes, Finella. That's why I want to help _____ do a project.
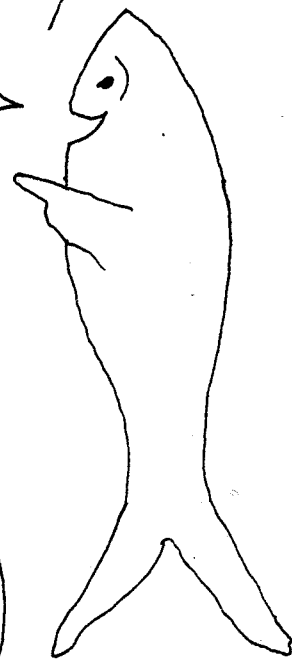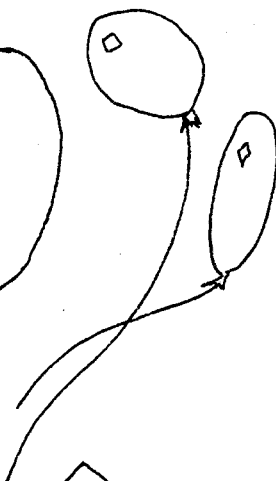
The first thing to do is to get an idea for a project. Let's walk around a bit and see if we can think of some good ideas.
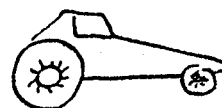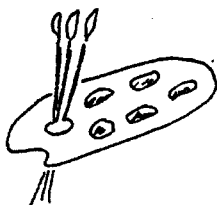
Where can we get ideas for a topic, Finella?

Ideas can come from | people | places | books | films

Here is a list from which you can get ideas:

1. Mom and Dad
2. Family
3. Teachers
4. People who have interesting jobs such as a nurse or fireman
5. Library
6. Books, magazines
7. T.V., newspapers
8. Films
9. Radio

ENCYCLOPEDIA

DAILY NEWS

DAD

PUBLIC LIBRARY
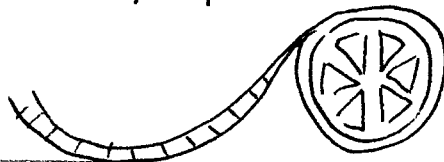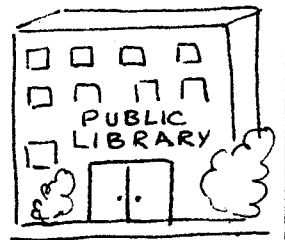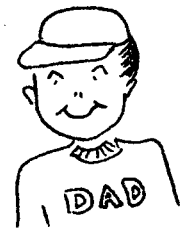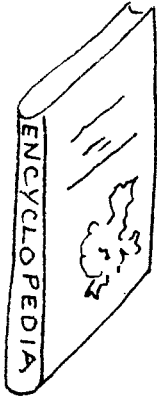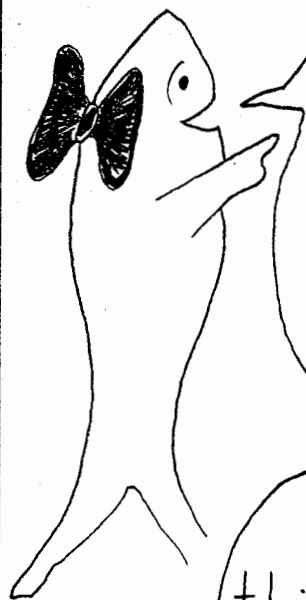
Now we are ready to think about a topic. The first thing to do is to make a list of things you would like to know more about.

Here is a list of things the animals would like to know more about.
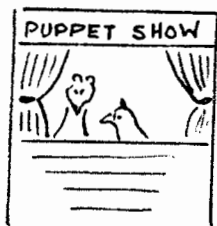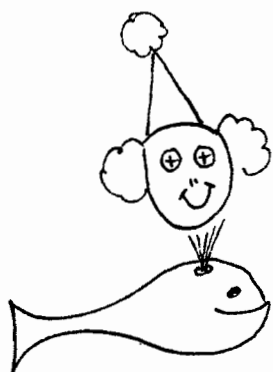
1. whales
2. racing cars
3. computors
4. dogs
5. clowns
6. doctors
7. how to play chess
8. how to bake a cake
9. how to put on a puppet play
10. how to make a calendar
11. how to make a bird feeder

PUPPET SHOW
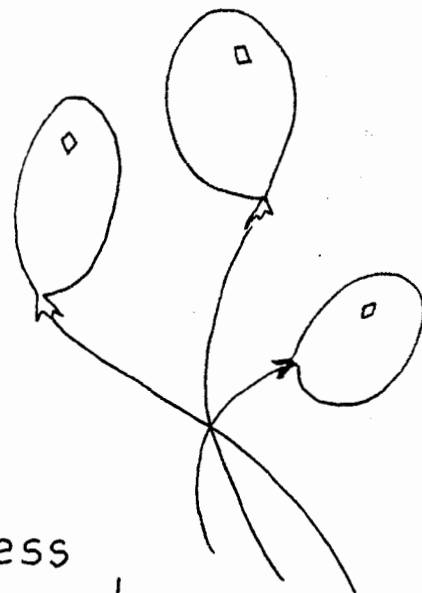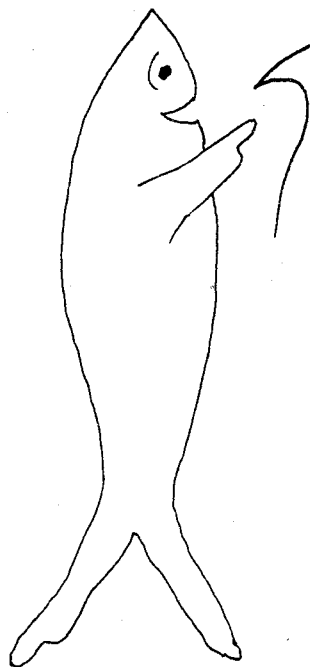
Write three things you would like to know more about. Yours [can] be the same as those the animals listed on page 7.

1.	
2.	
3.	
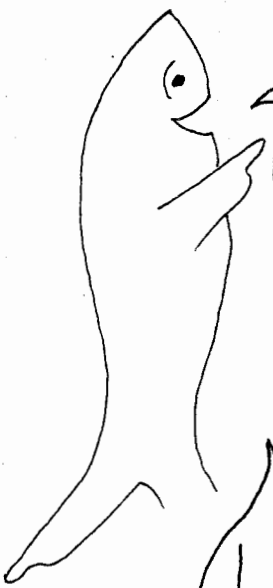
⊛ Place a star beside the one you like best.

⊛ Now Write the name of the topic you like best in the space below.

My [topic] is _____

Can you write a GOAL for your topic, _____ ?

What is a GOAL, Finny?

Let's ask the parrot. He might know.

My TOPIC is cakes but my GOAL is to learn how to make a cake. I also know who I could ask for help. I'd ask my mom and I'd look in her cook book. Maybe I could even visit a bakery and ask the baker how to make a cake.

My goal is to learn how to make a cake.

COOK BOOK

How about you _____?
Fill in the spaces below
with your [topic] and [goal.]

[Remember] to ask for help
if you don't understand
what to do.
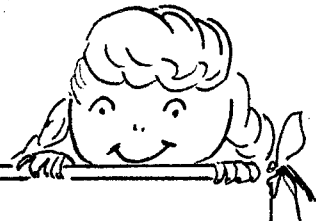
My name is _____

My topic is _____

My goal is _____

_____

_____

_____
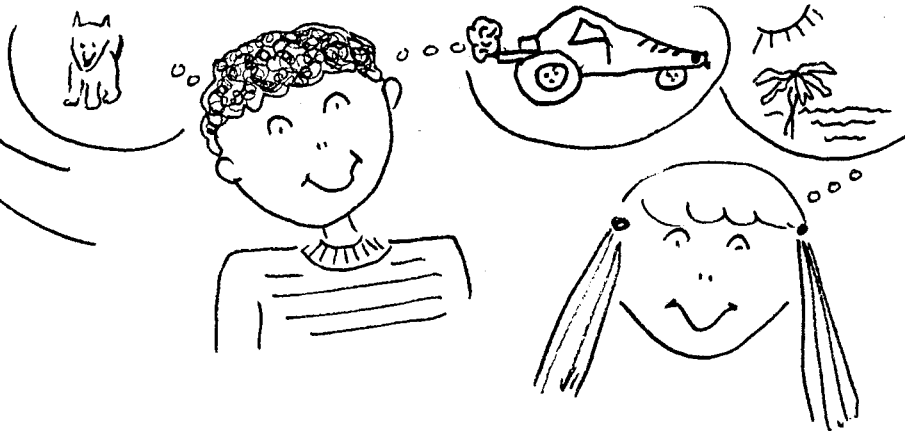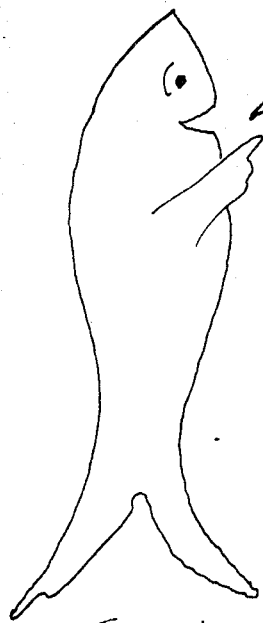
Parrot is going to make a cake to show what he has learned.

What [PRODUCT] can you make to show what you have learned about your topic, _____?
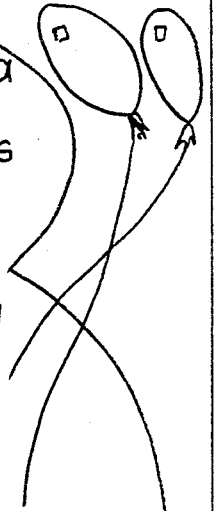
Let's ask a monkey at the zoo to help us with a list.

Here is my list of PRODUCTS _____. You can add more things to the list.
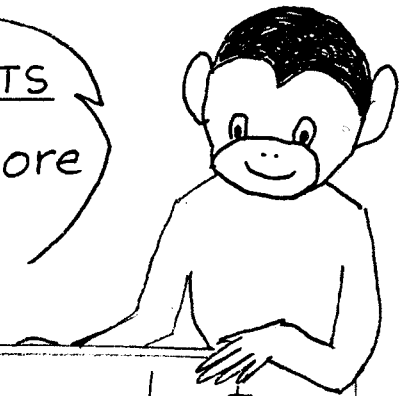
1. make a puppet	8. make a chart
2. make a model	9. make a peep box
3. write a play	10. make a calendar
4. paint a picture	11. write a poem
5. write a story	12. _____
6. make an information folder	13. _____
7. make a cake	14. _____
	(add your own ideas here)

Place a star beside one you would like to do.

Let's see what we have planned so far. Monkey, what have you planned? _____
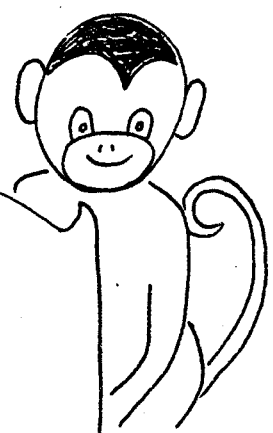
My TOPIC is _____ cars _____

My GOAL is __to learn about cars__

My PRODUCT or something I am going to make to show what I have learned is __a model of a__ __car out of clay_____

Now it's your turn _____.

My NAME is _____

My TOPIC is _____

My GOAL is _____

My PRODUCT or something I am going to make to show what I have learned is _____

_____

But how can I learn about cars, Finny?

1. You could ask somebody.
2. You could read a book.
3. You could read a magazine.
4. You could watch a T.V. program or filmstrip.
5. _____
6.
(Put your own ideas here)
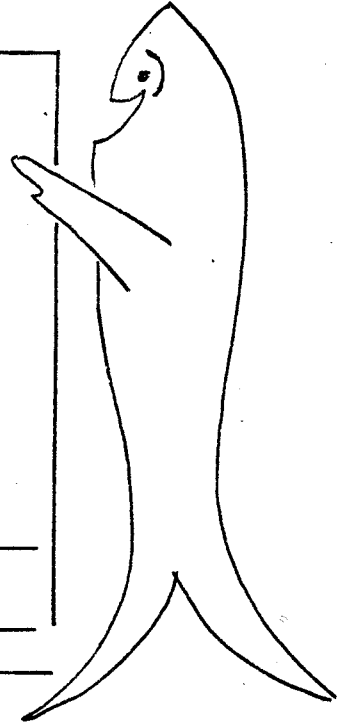
Can you think of other places where you could get help with your project?

Write them in the blank spaces beside 5 and 6.

Remember to look back to page 6 for more ideas.

What about you, _____?
Where can you get help and information for your project?
Remember:
You do not have to fill in all the spaces below. Only the ones you will need to help you with your project.
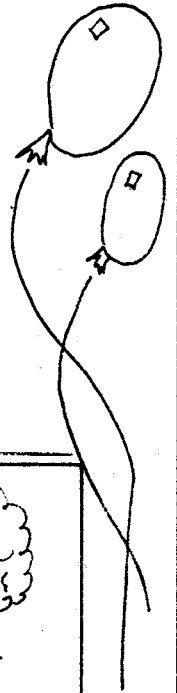
Someone I can ask for help is _____

A book or magazine I can read is _____ OWL

A place I could visit is ZOO _____
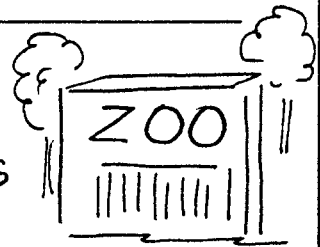
A filmstrip or T.V. show I could watch is _____
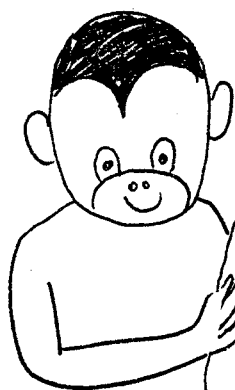
O.K. I'm ready to start.

Not so fast, monkey. Where are your **PLANS**?

That's right, monkey has not made a plan.

Let's see what a plan for monkey might look like.

🐵 🚗 Monkey's Plan 🚗 🐵	
TOPIC: cars	
GOAL: to learn about cars	
PRODUCT: model of a car	
PLAN: Things I will do	Materials I will need
Read a book about cars	clay
Ask my brother for help	
Make a model of a car	
TIME to make it: _____	

There is just one more thing for monkey to do before he can start.

What is that, Finella? My plan is all finished.

When are you going to finish your product, monkey? Is it going to take _2 days_ or _1 week_ or _2 weeks_? How long monkey?

Let me see. I think I can get it all done in 1 week. That should be on my plan too. Will you please put it on _____?

Now it is your turn _____. Print your plan in the box below.

PLAN

Things I will do	Materials I will need

ASK
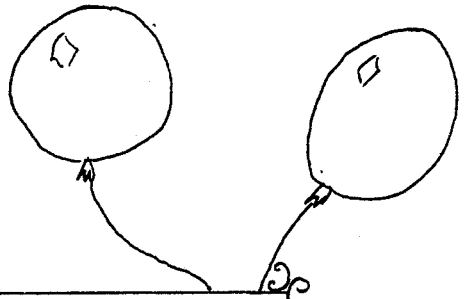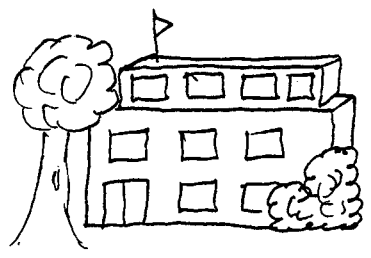
VISIT

READ
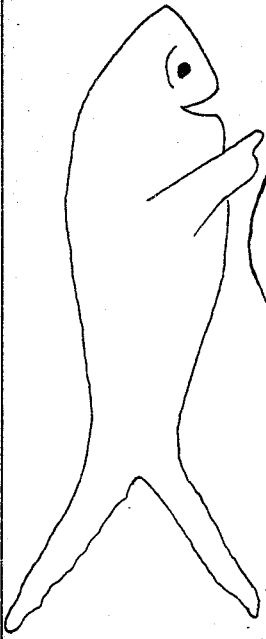
Since you have worked so hard on your project it would be nice if you shared it.

With whom could I share it ?
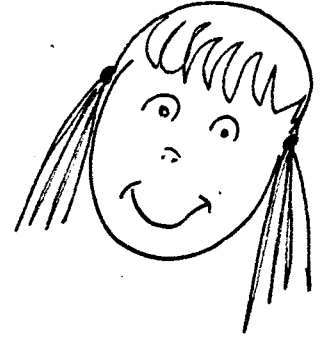
I could share my project with:

1. Mom and dad and family
2. Class
3. Teacher
4. Principal

Place a star beside the one or two with whom you would like to share your project.
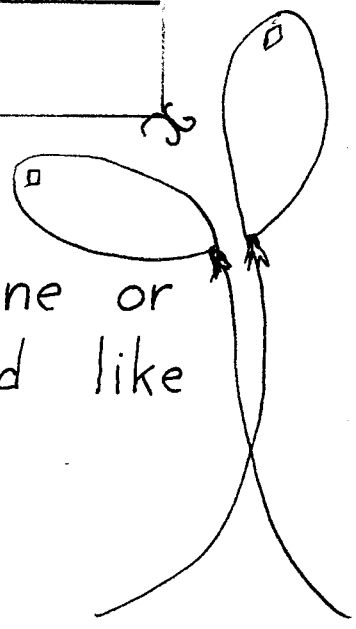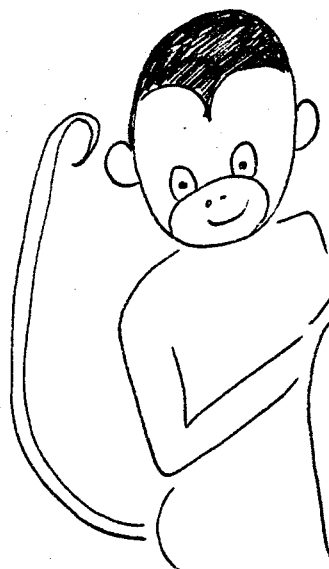
How do you share a project, Finella?

Here is a list of ideas, monkey. They might help _____.
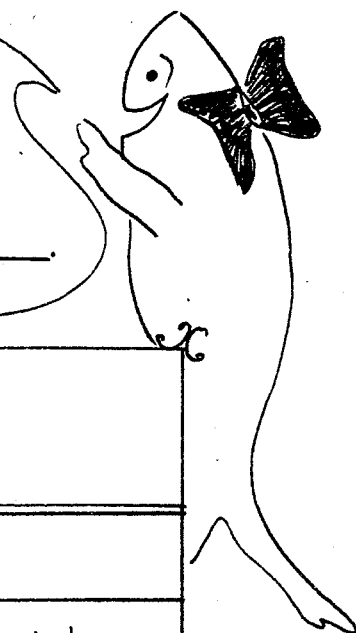
IDEAS for SHARING a project

1.	Show and tell about it
2.	Answer questions about it
3.	Draw pictures of things
4.	Tell about what I did
5.	Make a tape recording explaining my project and let people listen to it.
6.	

(Place your own idea here.)

Place a star beside the one you will do and ask your teacher when you can SHARE your project.

Now it's time to make a final overall project plan. ⊕ Print your plan in the box below.
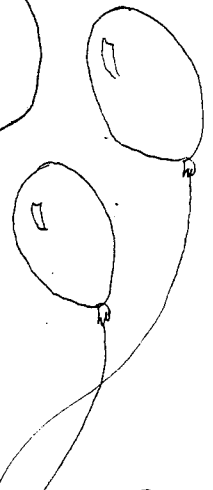
MY PROJECT PLAN

NAME:

TOPIC:

GOAL:

PRODUCT:

PLAN: Things I will do	Materials I will need

Time it will take to do my project: _____

How I will share my project: _____

How I will evaluate my project: _____

ASK

READ

SEE

VISIT

Now it's time to work on your project.

GOOD LUCK _____ !

APPENDIX D

TEACHER'S GUIDE

TEACHER'S GUIDE

TO

ACCOMPANY

FINNY & FINELLA

PRIMARY SELF-DIRECTED LEARNING ACTIVITY

TABLE OF CONTENTS

This program is about helping students take charge of their learning where the most important outcome is the student's ability to achieve success independently.

The emphasis in this program is on how to help students make their own decisions and develop commitment to them, and how to inspire students to their best efforts and provide the support they need.

PART I

THEORETICAL AND PRACTICAL

FRAMEWORK

WHAT IS SELF-DIRECTED LEARNING?

Some Views on Self-Directed Learning

>..."self-directed learning" describes a process
>in which individuals take the initiative, with
>or without the help of others, in diagnosing
>their learning needs, formulating learning goals,
>identifying human and material resources for
>learning, choosing and implementing appropriate
>learning strategies, and evaluating learning
>outcomes.

>Malcolm Knowles from "Self-Directed Learning"

>The first concensual principle of openness is
>self-direction, the focus is clearly on the
>individual child, and the learner is deeply
>involved in planning his own course of study.
>The best learning springs from the child's own
>enthusiasm and his own interests...
>Another important element of self-directed
>learning is self-pacing... A third part of
>self-orientation is self-selection...
>Self-assessment is a fourth element of self-
>directed learning.

>Hal Malehorn from "Open to Change"

>...The only man who is educated is the man
>who has learned how to learn; the man who has
>learned how to adapt and change; the man who
>has realized that no knowledge has been secure,
>that only the process of seeking knowledge
>gives basis for security...

>Carl Rogers from "Freedom to Learn"

>Today's world is such that you need to be a
>"together" person is order to cope with life.
>This means you need to be creative; you need
>to be able to relate on a feeling level; you
>need to know how to think critically; you need
>to clarify your values. Facts alone won't do.
>Content simply isn't enough.

>Heintz from "Independent Learning"

WHAT IS A SELF-DIRECTED LEARNING PROGRAM?

This program is designed to teach students how to direct their own learning by teaching them how to independently work through a project of their own choice.

The goal of the program is to help every student to learn a process for becoming self-directed and to conduct a challenge project that demonstrates the attainment of a working knowledge of the process.

The program contains the following components:

    a) choosing a topic

    b) setting a goal

    c) selecting appropriate and varied resources

    d) choosing a product

    e) planning learning activities

    f) setting a time line

    g) sharing the completed product

The skills needed in order to learn the processes involved in the program are taught through cartoon characters Finny and Finella. They teach, ask questions and guide the student through the various processes.

A second goal of the program is to cultivate through the processes those attitudes necessary for successful self-directed learning:

    *   independence

    *   confidence

    *   risk taking

    *   determination

    *   pride in self-direction

    *   realistic expectations

    *   drive to finish

WHY TEACH FOR SELF-DIRECTED LEARNING?

By teaching students to become self-directed we are teaching them a process that they can use for the rest of their lives.

By teaching the student to be self-directed we are cultivating those attitudes which foster independence, confidence, risk taking, determination, pride in accomplishments, realism in expectation and a drive to work towards completion.

By developing responsibility for their own learning students are provided with a framework for taking greater responsibility for their everyday living and their relationships with others.

THE TEACHER'S ROLE

The role of the teacher is not to direct students to
do what he wants them to do, or the way he wants them to do
it but rather the teacher's role is that of GUIDE and SUPPORT
person. The teacher must think of the students as curriculum
developers, each developing a personal curriculum to teach
themselves to become self-directed learners. They will need
to learn how to set goals, how to plan, how to develop skills,
how to solve problems, how to extend themselves, how to attain
and manage resources, how to organize time and effort, how to
evaluate their own accomplishments and how to interact with
peers, adults, and so on. It is the responsibility of the
teacher to help students to use the skills for learning on
their own, rather than how to repeat on a test the informa-
tion they have learned. The teacher must also challenge
students to challenge themselves. Intrinsic motivation is
essential to successful self-directed learning. Without
this ingredient learning cannot become a lifelong endeavour.
Lastly, the teacher must be instrumental in involving parents
and members of the community in their learning. Children
need to be made aware that learning must not and cannot be
confined to the classroom.

The teacher teaches less of WHAT and more of HOW and
strives to make students less dependent on direction and
more capable of directing themselves.

The teacher will help students to:

1. Decide what they want to do and how they can
   do it best.

2. Develop an individual plan for achieving his
   goal.

3. Take the responsibility for gathering the
   materials and other resources and for monitoring
   their own progress.

4. Evaluate their own performance in terms of
   individual improvement. The goal is to evaluate
   students individually according to how much they
   have improved on their beginning performance.

The teacher should employ high impact instructional
techniques such as:

1. Modelling - Children often exhibit behaviors similar to those with whom they are in frequent contact. The teacher should consciously model those characteristics such as respect for learning, courage in risk taking, respect for others, enthusiasm, empathy, desirable social behavior, flexibility of point of view, ingenuity in problem solving, trust and sharing.

2. Using the novelty of first time experiences either by presenting something or someone new, by organizing field trips, using media equipment in a new way or giving opportunities for children to plan or reorganize.

3. Relating learning to their lives. Those learning experiences children are most likely to remember are those which relate directly to something which is relevant to their lives at this particular moment in time either related to family, school or personal development.

THE TEACHER'S TASK

The teacher's GOAL is to help all the students involved in the program to become self-directed in order to be able to independently complete a project of their own choice.

The teacher does this by helping each student to:

1. Choose a topic for his/her project.

2. Set achievable goals.

3. Develop planning skills for developing a sequence of activities through which to achieve those goals.

4. Gather and manage materials and resources required.

5. Design a challenging activity that demonstrates his/her ability to successfully direct his own learning.

6. Develop the attitudes, habits, and skills needed to achieve success.

7. Demonstrate his/her accomplishment.

CREATING A POSITIVE LEARNING ENVIRONMENT

Creating a positive effective environment is the first step towards establishing a successful self-directed learning program. A few of the goals for creating a positive effective environment are listed below:

a) to make the classroom a comfortable place for students and teachers to learn and work cooperatively

b) to make the classroom a place where students feel free to ask questions and take risks because the group is supportive

c) to help students make choices and assume greater responsibility for their learning rather than looking to others for guidance or direction

d) to help students recognize individual differences in a positive way

First it is important to create within the child an awareness of self. The following are activities which help to achieve greater awareness of self:

1. Brainstorm words which describe emotions. Then have students complete how they feel.

   e.g. I feel happy when ....
        I feel sad when ....
        I am lonely when ....
        I hope that ....

2. Collage

   Have students collect pictures or words of all the things they like best. Place onto a large silhouette of the person's head.

3. Portrait

   Have students draw and describe themselves as they feel they are and how they would like to be.

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4. Create a calendar

   For a week or month have students describe what
   they would like to do.

5. Favorite things

   Have students make a list of their favorite things
   and most disliked things. Discussion why?

6. Letters

   Have students write a letter to themselves explain-
   ing something that is important to them. (This
   could be confidential).

The following activities create greater awareness of
others:

1. Choose one person in the group. Have each person
   give him/her a gift. e.g. happiness, love,
   understanding, etc.

2. Brainstorm for topics such as happiness, popularity,
   etc. Create a recipe from the list.

   e.g.

Happiness Cake	
love	2 cups
consideration	2 Tbs.
giving	1 Tbs.
friends	1 cup

3. Students name one thing they are really good at.
   Other students add at least one more item for each
   individual.

4. Sameness

   Brainstorm ways in which we are all the same. Ways
   in which we are different.

   e.g. babies, teenagers, parents, old people,
         nurses, firemen, etc.

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5. New Stories

    Identify the main person. Describe how others
    might be affected by the event described, or re-
    write the story from another point of view.

    e.g. story of a criminal from his point of view.

6. Name for a Day

    Become someone else for a day. Swap names with a
    class member and try to understand that person's
    problems, point of view, etc.

    e.g. very bright student to LAC

READINESS

It is generally agreed that certain skills are
required in order for a child to be able to undertake new
learning activities in curriculum areas such as reading,
arithmetic, etc. The child who is required to direct his
own learning must similarly possess certain readiness
skills.

In order to assess the primary child's readiness to
undertake a self-directed learning activity an attitude
survey was designed. There are 26 responses in all. The
responses given are yes, no, or sometimes. Responses yes
to questions 1, 5, 9, 10, 11, 12, 16, 18, 20, 25 and 26
are considered positive. Responses no to questions 2, 3,
4, 7, 8, 13, 14, 15, 17, 19, 22, 23 and 24 are considered
positive. It should be stressed that the competent
teacher's observation of the child's readiness is a very
useful guide. Teacher observation used in conjunction with
the attitude survey should, therefore, give a fairly accu-
rate description of the child's readiness to perform
independently.

"FINNY & FINELLA"

PRIMARY SELF-DIRECTED LEARNING PROJECT

SURVEY OF ATTITUDES

NAME: _____   BIRTHDATE: _____

GRADE: _____   AGE: _____

TEACHER: _____   DATE: _____

SCHOOL: _____

Write the answer that shows most clearly how you feel. (yes, no, sometimes)

1. I like working by myself.   _____

2. I like to share my finished work only with my
    teacher.   _____

3. I have trouble thinking of good ideas for my
    project.   _____

4. I am afraid of making mistakes in my work.   _____

5. I feel good when I have finished a project all
    by myself.   _____

6. I like to do projects where I don't have to
    write very much.   _____

7. I like to work with a group better than by
    myself.   _____

8. I leave my work until the last minute and then
    I can't get it done.   _____

9. I like getting information from many people and
    places.   _____

10. I like to share my finished work with a group.   _____

11. I ask for help when I don't understand something.   _____

12. It's easy for me to plan my own projects.   _____

13. I do a poor job when I do a project.   _____

14. I am afraid the teacher will say I did something
    wrong.   _____

15. I need more time to finish my projects.   _____

16. I like to choose my own topic for my project.   _____

17. I like getting all my information from one place.   _____

18. I like to plan my own projects.   _____

19. I am afraid to share my finished work.   _____

20. Doing my own projects is a lot of fun.   _____

21. I like to do a lot of writing in a project.   _____

22. I am afraid when the teacher tells me I have to
     do a project all by myself.   _____

23. I like it best when the teacher teaches me rather
     than doing it by myself.   _____

24. I like to do short projects only.   _____

25. I would like to do more projects if I had
     more time.   _____

26. My projects turn out as well as I think they
     will.   _____

CONFERENCING

The student-teacher conference is an essential part
of the program particularly when students become discouraged
and want to return to the security and comfort of a teacher-
directed situation. Conferences should be both planned and
spontaneous as the learning situation demands. The follow-
ing are suggestions when conferences may be most appropri-
ate and useful:

*   initially conferences are an important step
    in helping the student clarify his goal.

*   during the planning stages conferences help
    the student draw up a realistic contract
    and secure commitment for its completion.

*   during the action phase of the project con-
    ferences offer the student a time for:
    support and guidance, redirection if he
    fails, sharing of his successes, help through
    the "self-direction crisis".

*   conferences provide a time for a discussion
    of the student's learning style and the best
    way to utilize his own unique way of learning.

COPING WITH THE CRISIS OF SELF-DIRECTION

Children at every stage of development go through what has been termed the self-education crisis. The term refers to the difficult period when students make the transition from teacher-directed to self-directed learning. In their handbook entitled Helping Students Through the Self-Education Crisis, Gibbons and Phillips state that the crisis which students experience can be transformed into a turning point for successful self-directed learning. They list the following nine critical stages through which students proceed:

1. Decision - deciding to undertake a self-directed learning activity.

2. Initial Ecstacy - enjoying the new freedom of movement and relationships with staff and peers. Students, therefore, tend to make decisions which are either to easy and familiar or too grandiose and beyond reach.

3. Shock of Recognition - students recognize the huge task they face. They are overwhelmed by their own responsibility.

4. Crisis - shock turns to lethargy and procrastination. They perform at a level much lower than they anticipated and must deal with their failure. Some express feelings of regret, others express hostility and blame everyone else for their failure.

5. Realism - students accept the reality of their failure and begin to examine the demands of the program realistically. They develop a state of readiness for further work.

6. Commitment - behavior and attitudes necessary for self-directed learning emerge.

7. Achievement - problems arise and are dealt with. They begin to evaluate their own work. Rewards become less important than feelings of personal worth.

8. Plateau - after a round of success students become comfortable and tend to resist taking on new levels of challenge.

9. <u>Mobilization</u> - students become productive. Having done it to prove they could they now work for the rewards of competence.

Being aware of the crisis students might exhibit during self-directed learning stiuations the teacher can anticipate and be ready.

The following are suggestions for that purpose:

1. Teach the new skills of goal setting, time management and resource identification.

2. Establish one to one conferences to discuss learning style and learning tasks.

3. Inform parents and secure their commitment to support students during the transition crisis.

4. Clarify student and teacher roles: the teacher as guide; the student as initiator of his own learning.

5. Be ready to renegotiate learning contracts, setting more realistic goals and deadlines.

6. Reinforce signs of success.

7. Encourage student to solve his own problems and take risks in order to foster personal growth. Encourage group discussion of problems, accomplishments, and challenges. Encourage peer tutoring.

8. Establish patterns for self evaluation to intensify internal reward system.

9. Refuse to accept repetition of safe comfortable challenge activities. Constantly raise the level of competence required.

HOW THE PROGRAM CAN BE INCORPORATED INTO THE SCHOOL
CURRICULUM.

   After assessing the needs of the student as well as
the child's readiness to embark on a self-directed learning
project, the teacher may wish to use the program:

   a)   as a classroom activity conducted as part of
        a regular class by an individual teacher

                        or

   b)   as an independent activity undertaken by
        the student in his own time at school or
        at home.

                        or

   c)   as an independent study project in a specific
        curriculum area. e.g. Social Studies,
        Science, Language Arts, etc.

*   The process skills taught in the set of materials are
    applicable to any and all areas of the curriculum or
    student interest. The emphasis is always on teaching
    the child a process which will help him to become a
    successful lifelong learner.

PART II

HELPING STUDENTS BECOME SELF-DIRECTED

HELPING STUDENTS BECOME SELF-DIRECTED

In order for students to be able to become self-directed it is necessary for them to learn how to develop a plan of action. In this program they will be asked to: choose a topic, choose a product which will indicate what they have learned, choose appropriate resources, plan learning activities and strategies for completing a product, ascertaining problems they might encounter while working on the project, and estimating how much time is needed to complete the project.

The following activities are suggestions to help prepare the child to develop a simple overall plan:

1. As a group choose a simple project.

    e.g. making a puppet; baking a cake; painting a picture

2. Begin by asking the child to write a simple step-by-step plan for making the project.

    e.g. a snowman

Directions for making a Snowman

3. Then ask the child to list all the possible problems he might encounter.

Problems I Might Have

4. List how the problem might be solved.

    Note: If there are no possible solutions to the problems then the project may not be appropriate.

    e.g. making a snowman outside in the summer

5. Have the children estimate approximately how much time the project will take. Have them write their estimates on their plan. Later have them check how long it actually took with their estimates.

A. Helping Students Choose a Topic

Topics are most often chosen from the following two sources:

a) curriculum
b) student interest

a) Choosing a curriculum based topic:

i) Having chosen a general area of study the student/s brain storm all the possible ideas concerning the topic. Either lists or webs can be used.

e.g.

useful   harmful
parts of   Insects   size
species   colour
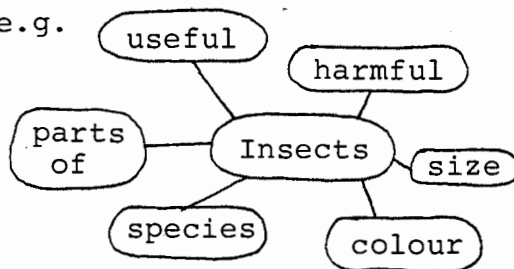
Insects
useful
harmful
parts of
species
size
colour

ii) Have the student further break down two of the topics which interest them most from the above list.

e.g.

to whom?
insects — harmful   names of
in what way?
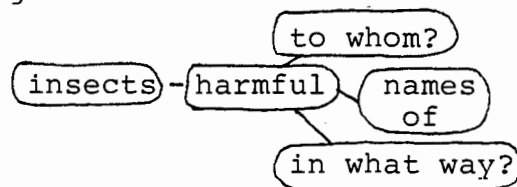
Harmful
to whom?
names of
in what way?

Now if the student chooses to do a project on harmful insects, he has the beginning of a series of questions he will consider under the topic.

b) Choosing an interest topic:

    i) Begin by having the child do an interest inventory.

> Things I do best
>
> _____   _____
>
> _____   _____
>
> Things I like to do most
>
> _____   _____
>
> _____   _____
>
> Things I would like to do most
>
> _____   _____
>
> _____   _____

    ii) Have the child prioritize the items in his lists. Have him create a web for the three items with a number 1 beside them.

        e.g.   1.   play baseball
                  1.   ride on my dad's motorbike
                  1.   own a horse

rules players baseball origin clubs motorbikes gas consumption makes racing horses kinds grooming equipment
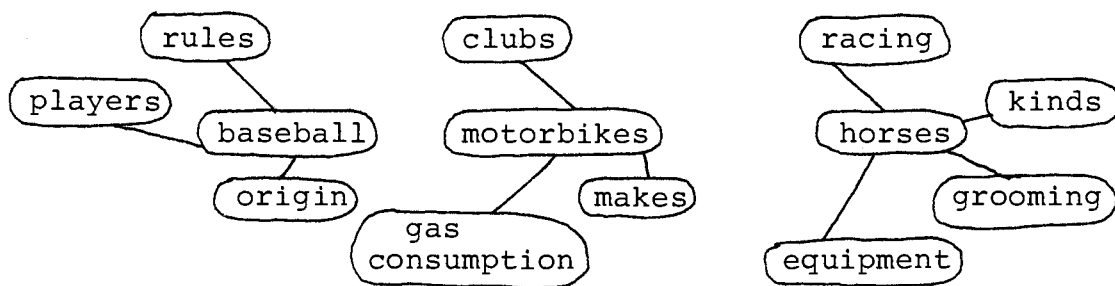
After consultation with the teacher the child is probably ready to choose the topic with the greatest possibilities for expansion.

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b) iii) Ask the child at this point to break down the topic of his choice once more. This will give him a group of sub-headings to work with.

e.g.
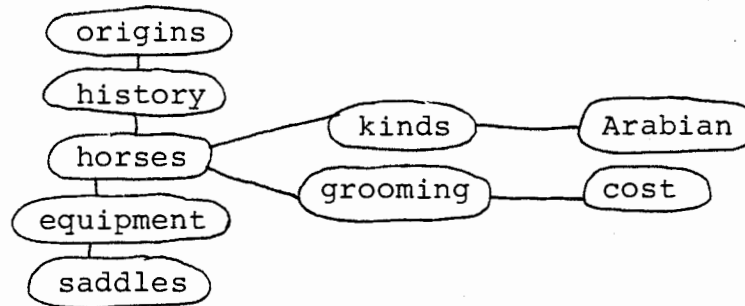
iv) Have the student check that there are sufficient resources to complete the project.

B.   Helping Students Set a Goal

Learning how to develop goals.

Divide the class into small groups. Have them go through the following process:

Use the topic of an on-going class project or a project which the class is beginning.

a)   List all the things we want to accomplish in the project.

b)   Discuss the list with your group.

Place a check beside the most important things on the list.

Place the checked statements in their order of importance.

These are the goals you wish to reach or the things you wish to accomplish.

```
-------------------------------------------------
|  Topic:  _____    |
|-----------------------------------------------|
|  Things we want to accomplish:                |
|                                               |
|  _____  |
|  _____  |
|  _____  |
|  _____  |
|                                               |
|  Place beside each the number                 |
|  in order of importance.                      |
-------------------------------------------------
```

c)   Now make a statement that gives an overall picture of the most important thing that all of your objectives put together wish to accomplish.

C. Helping Students Develop a Plan of Action

   a) Begin by giving the children a simple topic.
       e.g. How to make a snowman.

   b) Together develop a simple plan of action.

Plan of Action
Topic:
Goal:
Steps I will take to make a snowman: 1. _____ 2. _____ 3. _____ 4. _____ 5. _____
Problems I might encounter: _____ _____
How I might be able to solve the problems: _____ _____
Time it will take to make the snowman: _____

   c) Together discuss the problems and solutions. If
       solutions cannot be found to solve the problems the
       project might have to be abandoned.

   d) Together estimate about how much time it would take
       to make the snowman.

D. Helping Students Locate Appropriate Resources

Step   I   Immediate Resources

Begin close at hand, e.g. school in terms
of staff, students, library, District
Central office, parents, etc.

Step   II   Community Resources

List locally available resources. Be sure
to tap into these resources. e.g. game
farm, doctors, firemen, equestrian centre,
shops, artists, writers, etc.

Step III   Distant or Difficult to Obtain Resources

Determine their value in terms of the
project. If necessary continue to pursue
them. e.g. writing for information - will
the information return soon enough to be
useful?

Step   IV   Using the resources to collect and organize
information:

a)   List all the available resources

e.g.

```
                    T.V. shows
   zoo                                    stories
                                   books <
pictures  --        ┌────────┐  --         poems
                    │  bears │             encyclopedia
experts             └────────┘
             films                   magazines
                        newspaper
```
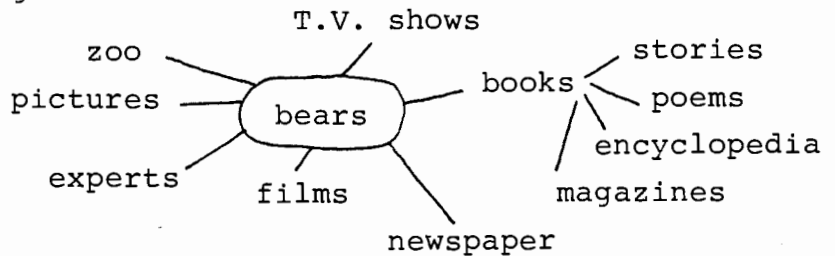
b)   List under each heading what resource is
available.

e.g.   Books on bears   Films on bears

_____   _____

_____   _____

c) Examine the resources.
    Select the most appropriate materials
    for the topic chosen. Under the topic
    list only those resources which have
    the information specifically needed.

e.g.

```
┌─────────────────────────────────────────┐
│ Topic:   Kinds of bears                  │
├─────────────────────────────────────────┤
│ Resources:                               │
│   books              _____ │
│                      _____ │
│   films              _____ │
│   & filmstrips       _____ │
│                      _____ │
│   newspaper          _____ │
│   articles           _____ │
│   experts to                             │
│   interview          _____ │
│                      _____ │
│   T. V. shows        _____ │
│                      _____ │
│                      _____ │
│   Magazines          _____ │
│                      _____ │
└─────────────────────────────────────────┘
```

d) Prepare rough notes in the form of reports,
    models, charts, etc. to be used for your
    final product.

Note: Depending on the topic and the product the child has
       chosen, research may be restricted to one or two
       resources. e.g. Learning to make a cake.

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E.   Helping Students Estimate Time

     Ask the child if he can tell you how long it takes
him to get dressed and ready for school in the morning.
Have him place a circle in the center of the page.
Write in the circle the task "Getting ready for school".
Place around the circle all the things you do to get
ready in the morning. Now place an estimated time
beside each.
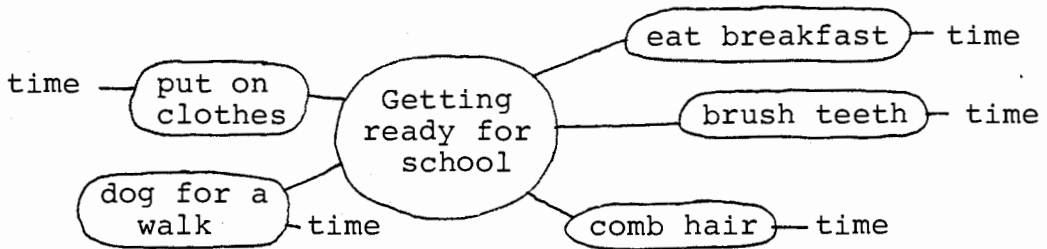
Total time

Estimated time

Now ask the child what time he gets up in the morning
and what time he leaves for school. The time he approxi-
mated should be very close to the actual time it takes
him to get ready.

     Play this game until children feel comfortable with
estimating time.

     Use this same plan for the topic which the child has
chosen and webbed. Beside each heading and sub-heading
have him place an estimated time.

Total time   6 days

27
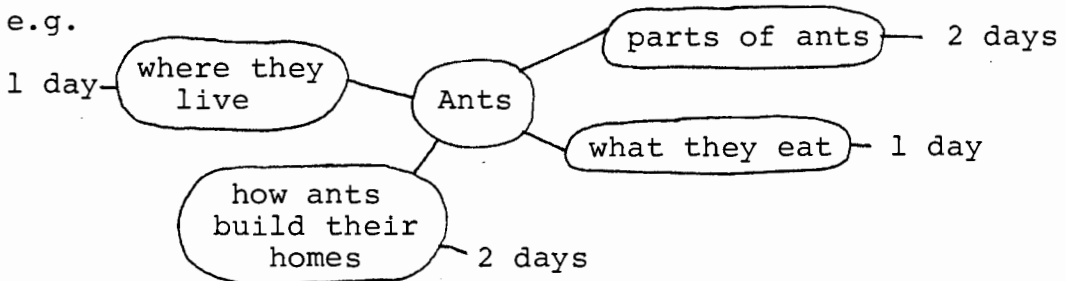
F.   Helping Students Share Their Finished Products

   a)   Have the students brainstorm possible ways of
        presenting their projects. Use a web to maximize
        the use of new ideas.
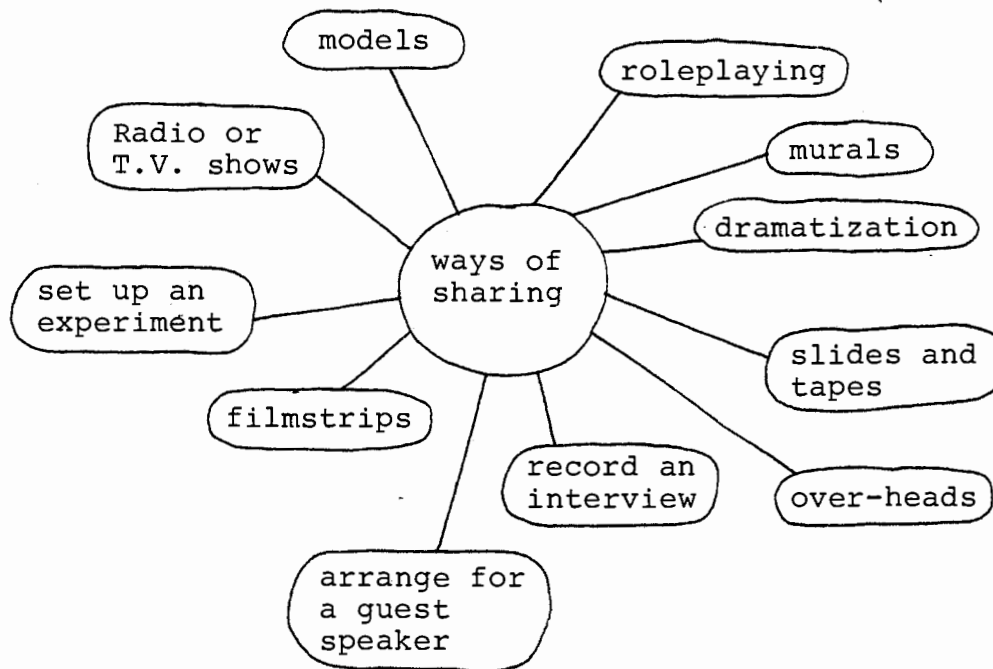
   b)   Decide who will be present when the project is
        shared. Some students may wish to share only with
        the teacher or only with parents.

G.   Helping Students Evaluate Their Products

Teacher evaluation of the project should be kept
very general. Since it is a self-directed project
where the student sets his own goals the emphasis
should be on self evaluation.

<u>Teacher</u> <u>evaluation</u> should include only the following:

effort

originality

organization

<u>Self-evaluation</u>: Discuss with the student the follow-
ing questions:

Did I realize my goal? If not, why?

What I liked best about my project?

How can I improve my project?

TEACHER EXPECTATION vs. CHILDREN'S EXPECTATIONS

When dealing with children of any age it is important
to be realistic in ones expectations of their achievements.
For example a self-directed project completed by a 6-year
old will be very different from the product created by a 10-
year old. It is important to remember that the amount of
writing which the younger child becomes engaged in during
the course of a project is negligible. He is more comfort-
able making or doing. The emphasis, therefore, should not
be on preconceived notions of productiveness but rather
on the amount of SELF-directedness exhibited by the child.
The evaluation must always be measured against the child's
ability, maturity and degree of self-directedness.

PART III

MINI-PROJECTS FOR THE

SELF-DIRECTED LEARNER

MINI SELF-DIRECTED LEARNING PROJECTS

It is essential that students experience success early in their endeavours to become self-directed. One-hour projects are a good way to start after children have been taught all the skills in this section.

* Brainstorm and list numerous one-hour challenges.

* Explain the mini-contract format.

* Create a rating or system for evaluating the completed projects - e.g. excellent, good, fair, blah!

* Give each student a contract and encourage him to proceed.

* Negotiate the contract.

* Evaluate the project upon completion.

Mini self-directed learning project contract:

```
┌─────────────────────────────────────────────┐
│           ONE HOUR MINI-CONTRACT             │
├─────────────────────────────────────────────┤
│ Date:      _____              │
│                                              │
│ Name:      _____              │
│                                              │
│ GOAL:    (taken from the list or developed by│
│                                              │
│          the student)                        │
│                                              │
│ PLAN:    (how the student plans to accomplish│
│                                              │
│          the goal)                           │
│                                              │
│ RESULTS:   (how well the plan worked)        │
│                                              │
│          _____ │
│                                              │
│ SIGNATURES:      _____            │
│                   (Student)                  │
│                                              │
│                  _____            │
│                   (Teacher)                  │
└─────────────────────────────────────────────┘
```

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List of suggested One Hour Self-Directed Projects

Develop a plan in order to:

1. make someone smile

2. make your teacher, mom, dad or sister feel good

3. interview someone who knows or does something interesting

4. use free time constructively

5. make a present

6. invent or create something new

After the children have successfully completed several one-hour self-directed projects, move on to one-week projects, etc.

* Be sure to go through all the steps when completing the mini projects. Don't forget negotiation, student-teacher conferences, demonstration and evaluation.

APPENDIX E

SAMPLES OF EVALUATION MATERIALS

USED FOR THE STUDY

Sentence Completion

Survey of Attitudes

Interview

Checklist

Task Evaluation

Teacher Response Sheet

INSTRUCTIONS FOR TEST ADMINISTRATION

Every effort should be made to put the children at ease during the testing situation.

Tests should NOT be timed. Children should be given all the time they require to answer the questions.

This is NOT a reading test. Terms and words not understood by the children may be explained in such a way that the student is not "led" into giving a particular answer.

Children should feel free to leave out any question they do not understand.

This is NOT a test with RIGHT or WRONG answers. It is imperative that children understand this.

PRIMARY SELF-DIRECTED LEARNING PROJECT

SENTENCE COMPLETION

NAME: _____   BIRTHDATE: _____

GRADE: _____   AGE: _____

TEACHER: _____   DATE: _____

SCHOOL: _____

1. When I am asked to do a project completely by myself I feel _____

_____

2. The first thing I do when I begin a project is _____

_____

3. The way I choose what to do my project about is _____

_____

4. Some places I can go to get what I need to do my project are: _____

_____

5. I can show what I have learned while doing my project by _____

_____

6. Steps I would take in order to learn how to bake a cake would be _____

_____

7. If I had only 2 hours to finish my project I could make sure I finished

it on time if _____

_____

8. The way I can share my finished product is _____

_____

9. The way I can tell how well I've done in my project is _____

_____

"FINNY & FINELLA"

PRIMARY SELF-DIRECTED LEARNING PROJECT

SURVEY OF ATTITUDES

NAME: _____   BIRTHDATE: _____

GRADE: _____   AGE: _____

TEACHER: _____   DATE: _____

SCHOOL: _____

Write the answer that shows most clearly how you feel.
(yes, no, sometimes)

1. I like working by myself.   _____

2. I like to share my finished work only with
    my teacher.   _____

3. I have trouble thinking of good ideas for
    my project.   _____

4. I am afraid of making mistakes in my work.   _____

5. I feel good when I have finished a project
    all my myself.   _____

6. I like to do projects where I don't have to
    write very much.   _____

7. I like to work with a group better than by
    myself.   _____

8. I leave my work until the last minute and
    then I can't get it done.   _____

9. I like getting information from many people
    and places.   _____

10. I like to share my finished work with a group. _____

11. I ask for help when I don't understand
    something.   _____

12. It's easy for me to plan my own projects.   _____

SURVEY OF ATTITUDES   Page 2   NAME: _____

13. I do a poor job when I do a project.   _____

14. I am afraid the teacher will say I did some-
     thing wrong.   _____

15. I need more time to finish my projects.   _____

16. I like to choose my own topic for my project. _____

17. I like getting all my information from one
     place.   _____

18. I like to plan my own projects.   _____

19. I am afraid to share my finished work.   _____

20. Doing my own projects is a lot of fun.   _____

21. I like to do a lot of writing in a project.   _____

22. I am afraid when the teacher tells me I
     have to do a project all by myself.   _____

23. I like it best when the teacher teaches
     me rather than doing it by myself.   _____

24. I like to do short projects only.   _____

25. I would like to do more projects if I had
     more time.   _____

26. My projects turn out as well as I think
     they will.   _____

PRIMARY SELF-DIRECTED LEARNING PROJECT
INTERVIEW

NAME: _____   DATE: _____

1. What did you like best about working with Finny & Finella?

    _____

    _____

2. What part was difficult for you? Why?

    _____

    _____

3. Were you happy with your product? Why or why not?

    _____

    _____

    _____

4. Did you have enough time to finish your project? If no, why not?

    _____

    _____

5. With whom did you share your product?

    _____

    _____

    _____

6. Did you enjoy sharing your project? Why or why not?

    _____

    _____

    _____

7. Would you like to do another project using Finny & Finella as your guides?
    Why?

    _____

    _____

    _____

* The responses should be as specific as possible.
   Get the child to give a specific example wherever possible.

PRIMARY SELF-DIRECTED LEARNING PROJECT

INSTRUCTIONS FOR RECORDING OBSERVATIONS ON THE

STUDENT CHECKLIST FOR THE PRIMARY "FINNY & FINELLA"

SELF-DIRECTED LEARNING PROGRAM

The following elements of self-directed learning are being introduced and taught in the "Finny & Finella" program.

In the materials the students are taught to:

1. generate an idea
2. develop a plan of action in order to reach a goal
3. use a variety of resources
4. challenge himself
5. anticipate and solve problems
6. be self-motivating
7. to set up and keep to a timetable
8. evaluate his success
9. demonstrate success

The components of the check list should be interpreted as follows:

Absorbed: The student is actively involved in some aspect of the "Finny & Finella" program.

Not Absorbed: Child is distracted or not engaged in any particular activity or a non-related activity.

Activity: What activity is the child involved in? If the child is involved in one of the self-directed learning activities listed above, then reference to the number is sufficient. However, the child may be involved in other activities such as: doodling, staring into space, talking to a neighbour, playing with his pencil, eraser, etc. Whatever the activity it should be recorded. e.g. constructive activity.

Successful: In your judgment is the student successfully involved
                        in some aspect of "Finny & Finella"?

Difficulty: Identify the difficulty. Make specific reference to
                        "Finny & Finella" wherever possible.

Observation & Comment: Comment on the cause or the success of the difficulty.

Seeking help: Is the student seeking help because he needs it or is he
                        behaving in a dependent manner by seeking help continu-
                        ously?

What is needed?   Comments here should answer the concerns for what is
                        needed to correct the student's difficulty or to maximize
                        success for the student.

Final comment: Which of the following (if any) characteristics exhibited
                        by a self-directed learner did the student exhibit when
                        he was observed?

                        1) independence - he is able to proceed without aid

                        2) confidence

                        3) risk taking

                        4) determination

                        5) pride in self-direction

                        6) realistic (about expectations for himself)

                        7) drive to succeed or to finish a task

**   Observations recorded at least once per period during the time the
     student is working on the "Finny & Finella" program.

"FINNY & FINELLA"

PRIMARY SELF-DIRECTED LEARNING PROJECT

STUDENT CHECKLIST

TEACHER: _____ GRADE: _____ SCHOOL: _____ DATE: _____

NAME	ABSORBED IN TASK / NOT ABSORBED IN TASK	ACTIVITY: ABSORBED OR NOT ABSORBED	SUCCESSFUL / DIFFICULTY	OBSERVATION AND COMMENT ON SUCCESS OR DIFFICULTY	SEEKING HELP	WHAT IS NEEDED	COMMENT CHARACTERISTIC OF SELF-DIRECTED LEARNING

PRIMARY SELF-DIRECTED LEARNING PROJECT

TASK FOR EVALUATING SELF-DIRECTED LEARNING

The "Task" is to be assigned to the child upon completion of "Finny & Finella", a Primary Self-Directed Learning Project. Time allotted for completion of the task is 2 hours. The task may be completed and turned in any time prior to the 2-hour time allotment.

1. Instructions to the child:

On the two days preceding the "task" the group is reminded once each day that on _____ (the third day) they will be asked to complete a project during the space of 2 hours.

The following instructions should be given:

> "On Thursday you will be asked to complete a
> project completely on your own. You will be
> given two hours in which to complete the
> project."

2. Interview (pre):

Each child is interviewed at the time scheduled for him to begin his project. He is asked the following questions which are recorded by the interviewer:

a) How do you feel about having two hours to do a project?

b) What is your project about?

c) What do you intend to achieve?

d) How are you going to go about it?

e) What do you expect to produce?

3. Observation:

Observation of purposeful activity. Observation should be at regular intervals, at least 3 times during the 2 hours allotted for completion of the task. See Observation Sheet.

4. Judging <u>Success</u> of student completion in the time set for the "task".

    Here one is looking for the degree and quality of completion.
This will be based on group comparison.

    a) Did the student complete the project? _____
        If not, how much of the project did he complete?
          i) less than half ____
         ii) about half   ____
        iii) more than half ____
         iv) almost all   ____

    b) Within the terms of what the student set out to do and from
        what you know of the student and given the kind of task he
        chose, what was the quality of the outcome?
          i) below standard for this student   ____
         ii) average for this student   ____
        iii) better than expected for this student ____

5. <u>Interview</u> (Post):

    At the time the student has completed his project (this might be
before the allotted time is up) the student is asked to respond to the
following:

    a) Did you do the product you set out to do?

    b) Did you finish what you expected to finish?

    c) How do you feel about being involved in the task?

    d) How satisfied are you with what you did accomplish?

    e) What would you do differently if you could do it again?

"FINNY & FINELLA"

PRIMARY SELF-DIRECTED LEARNING PROJECT

TASK EVALUATION

NAME: _____   BIRTHDATE: _____

GRADE: _____   AGE: _____

TEACHER: _____   DATE: _____

SCHOOL: _____

PRE-TASK INTERVIEW

a) How do you feel about having two hours to do a project?

_____

_____

b) What is your project about?

_____

c) What do you intend to achieve?

_____

_____

d) How are you going to go about it?

_____

_____

e) What do you expect to produce?

_____

_____

JUDGING SUCCESS OF STUDENT COMPLETION

a) Did the student complete the project?   _____
    If not, how much of the project did he complete?
      i) less than half   ____
     ii) about half   ____
    iii) more than half   ____
     iv) almost all   ____

TASK EVALUATION   Page 2

JUDGING SUCCESS OF STUDENT COMPLETION (Continued)

b) Within the terms of what the student set out to do and from what you
    know of the student and given the kind of task he chose, what was the
    quality of the outcome?

      i) below standard for this student   ____

     ii) average for this student   ____

    iii) better than expected for this student ____

POST INTERVIEW

a) Did you do the product you set out to do?

    _____

b) Did you finish what you expected to finish?

    _____

c) How do you feel about being involved in the task?

    _____

    _____

d) How satisfied are you with what you did accomplish?

    _____

e) What would you do differently if you could do it again?

    _____

    _____

    _____

PRIMARY SELF-DIRECTED LEARNING PROJECT

TEACHER RESPONSE SHEET

1. How effective was this program in leading your students to self-direction
    on a scale of 1 - 10? _____   1 = inadequate   10 = excellent

    Comment: _____

    _____

    _____

    _____

    _____

    _____

2. What specific activities seemed most helpful in teaching students the skills
    of self-direction?

    _____

    _____

    _____

    _____

    _____

3. What specific aspects of "Finny & Finella" program gave the students
    difficulties?

    _____

    _____

    _____

    _____

4. What would you recommend to improve the "Finny & Finella" program?

    _____

    _____

    _____

    _____

    _____

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