DOCUMENT RESUME

ED 345 878 PS 020 636

AUTHOR Riley, Mary Tom
TITLE A Quick Study: Child Growth and Development Handbook. SHAPES.
INSTITUTION Texas Tech Univ., Lubbock. Inst. for Child and Family Studies.
SPONS AGENCY South Plains Community Action Association, Lubbock, TX.; Texas State Dept. of Human Services, Austin.
PUB DATE 91
CONTRACT 0202
NOTE 83p.; For other books in this five-book series, see PS 020 637-640.
PUB TYPE Guides - Non-Classroom Use (055)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Children; *Cognitive Development; *Developmental Stages; Developmental Tasks; Early Childhood Education; Elementary Education; *Emotional Development; Guidance; Language Acquisition; Motor Development; Perceptual Development; *Physical Development; Self Concept; *Social Development
IDENTIFIERS Developmental Theory

ABSTRACT

SHAPES--an acronym for the South Plains Child Care Management Services (SpCCMS) Helping, Assisting and Preparing Educators and Staff--is also the name of a preschool readiness curriculum that is being developed for use by administrators and teachers. The first phase of the curriculum development consists of the publication of five books to be used in training teaching staff. The present text is the first book in the series. This book: (1) describes child development theories and developmental stages; (2) delineates the physical, cognitive, social, and emotional development of children; (3) explains practices for teachers and parents to use in developing the child's self-concept; and (4) discusses child guidance and discipline. The chapters that discuss child development are organized into a sequence that examines infants, toddlers, preschool children, and school-age children. A list of 35 references is provided. (BC)

South Plains Child Care Management Services Helping, Assisting and Preparing Educators and Staff

A Quick Study:

Child Growth and Development Handbook

SHAPES

A QUICK STUDY: CHILD GROWTH AND DEVELOPMENT HANDBOOK

By

Dr. Mary Tom Riley
Institute for Child & Family Studies
Texas Tech University

Summer 1991

This publication was prepared pursuant to contract number 0202 between Texas Department of Human Services and South Plains Community Action Association. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official Texas Department of Human Services or South Plains Community Action Association position or policy.

Table of Contents

Preface 1

Chapter 1
What is Child Development?

Some Good Reasons to Understand Child Development -- or Else 2
Major Theories of Child Development -- In a Nutshell! 3

Chapter 2
Infancy to Toddlerhood

About Babies 9
Baby Talk Summarized 22
Good Feelings 23
Teaching and Amusing the Baby 24
Great Expectations -- A Summary of Infant/Toddler Social Behavior . . . 29
A List of Characteristics for Two-Year-Olds 33
Learning to Say No and Meaning It 33
Face Savers -- Some Toddler Techniques 33
Terrible and Lovable Two-Year-Olds 34

Chapter 3
Preschool Years – Stormy to Sunny

All Through the Threes 35
Moving on at Four 36
Five and Alive 39
More Preschool Characteristics 39
Physical Growth During the Preschool Years 40
Socialization During the Preschool Years 44
Patterns of Play 45
Preoperational Thought Leading to Language Development 46
Language Development 47
Best Bets for Understanding the Preschool Years 47

Chapter 4
School Age: The Child's Expanding World

Body, Mind, and Spirit 53
What is the Six to Nine-Year-Old Child About? 57
Bye-Bye Childhood: Nine to Twelve Years Old! 58
A Checklist on Understanding School-Age Children 61

Chapter 5
Fast Check: Child Guidance and Discipline

Don't Forget the Goal -- A Great Self-Concept 69
Ten Golden Rules for Classroom Management 70
Helpful Hints for Guidance 71
Guiding Those Hyperactive Children 71
The Hyperactive Child 73
Strategies Improving the Effectiveness of Discipline 74

PREFACE

SHAPES is an acronym for the **S**outh Plains Child Care Management Services (SpCCMS) **H**elping, **A**ssisting and **P**reparing **E**ducators and **S**taff. The SHAPES acronym also names this preschool readiness curriculum, which is being developed annually in phases for use by administrators and teachers. Phase I consists of five books to be used in the training of the teaching staff. It can be used by the teachers for referencing appropriate child care practices and curriculum and for developing the first six weeks of lesson plans.

A Quick Study: Child Growth and Development Handbook is number one of the five-book series. This book describes child development theories and the stages of development in a concise method. Further, it delineates the physical, cognitive, social and emotional development of children, presented for easy reading and rapid understanding by the reader. *A Quick Study* explains the best practices for teachers and parents to use in the child's self-concept development and, in the last chapter, discusses the topics of child guidance and discipline.

A Quick Study introduces practices to help ensure quality beginnings in child care and suggests a framework for further study. It is a good reference for beginning teachers, and those wanting to review and study how children develop will consider this handbook a basic tool.

SHAPES curriculum books published for Phase I include not only *A Quick Study: Child Growth and Development Handbook*, but four others: *Guidance Concerning Minimum Standards*; *A Beginning Curriculum: The First Six Weeks*; *Environments That Make a Difference*; and *Training with the Trainer's Manual*.

Acknowledgments

Authorship of a curriculum is only one aspect of the total development of such a publication. Commitment, support and contributions made by individuals actively involved in the SHAPES curriculum development make the result a product of teamwork.

Connie Hindman, Child Development Specialist, Texas Department of Human Services; Landereth Freeman, Director, South Plains Child Care Management Services; Bill Powell, Deputy Director, South Plains Community Action Association, Incorporated; and staff members acted as an executive committee providing ideas, identifying needs and correcting oversights to improve the SHAPES curriculum and teacher training. I express my deep appreciation for their generosity of time, thoughts and goodwill.

Amanda Smith served as the SHAPES project coordinator. Through her tireless efforts, the manuscripts were edited, and typed, and the layout and artwork evolved. She was also the executive editor for the project. I am especially grateful for her professional interest and loyalty to the SHAPES publication.

I want to thank Deborah Cunningham for the final edit of manuscript, and Sheri Lokken, Misty Dolan and Nancy Scott for the pages of typed manuscript. Dawn Jones, graphic designer, contributed greatly to the publication with her artwork.

An education committee of early childhood professionals contributed greatly through critiques and ideas they presented during the development of the curriculum. The table of contents, general format and final copy were field-edited by a group of highly dedicated and influential early childhood educators and administrators from the South Plains of Texas. Thanks to each of you for your commitment to young children and to this project.

Betty Anderson
Onieda Bennett
Darla Bennett
Nancy Benz
Stephanie Berry
Karen Boyce
Maye Constancio
Joanne Cotter
Landereth Freeman
Betty Fuller
Karen Hayden
Connie Hindman
Chris Hoeve
Marge Hopper
Nancy Johnson
Carla Ann Kelly
Sandra McDonald
Iris Martin
Debrah Mashburn
Bonnie Mather
Ginger Perkins
Frances Sams
Dr. Tom Slatton
Josie Williams
Nelle Watson

CHAPTER 1

What is Child Development?

Mrs. Garcia is very pleased that Danny has finally stopped crying. Each day, separation from his mother has become more traumatic for all. For the past three weeks, Danny has cried and cried after his mother departed for work. He has been very sad most of the time after the crying stopped and has refused to play with the other children. Maybe today will be better. Ms. Garcia has been worried that her other children are beginning to feel neglected as Danny has demanded so very much of her time.

Meanwhile, across town at the big day-care center, Rachel is behaving quite boisterously. She runs through the center dressed as a witch, scaring other children and making loud noises. Each time she enters the dramatic play center, she assembles some dress or costume and then proceeds to dramatize her existence by imaginatively extending her boundaries far beyond the learning center setting. The make-believe is quite authentic as far as Rachel is concerned. Rachel is never satisfied to limit her enjoyment to the learning center where she attained her new attire. Her "performance" requires the use of the entire center as her stage. Her teacher's measures to divert her attentions and calm the pitch of activity appear futile.

In another private day-care setting, the teacher observes that Billy still toddles as he walks around and responds with "no" to all questions asked. She has observed that Billy holds his breath, screams, throws things and frequently says "no" even when not asked any questions.

Child development focuses on children's growth and physical change. Developmental psychology, involving children's behavior and interactions with the world, gives caregivers of young children insights into the preschool years. The situations described in the above

paragraphs raise some interesting child development issues:

- Are children really broken hearted when a parent leaves them and they cry? What can happen to help them understand and accept the parent's absences and be happy in day care?
- How can Rachel be taught to temper her excitement and joy when using dramatic play props? Is her emotional attachment just a phase or is it used to act out needs?
- What about Billy? Will the passing of the "Terrible Twos" improve his moods and behavior?

All of these questions have important implications for parents and teachers of young children. Before we discuss specific issues, it will be helpful to examine the purpose and goals of child development in our child care management system.

Some Good Reasons to Understand Child Development - or ELSE!

Child development is the study of how and why children change over time. Some of the changes children undergo as they mature are obvious and relatively easy to measure. We can readily observe behavioral changes, as they begin to expand their circle of friends, add new words to their vocabularies, and learn new skills. Less obvious to the adult observer is when children are better able to understand cause and effect relationships. As they grow more self-confident, interacting with the world becomes more comfortable and more meaningful to the child. Learning to identify and describe behavioral patterns, their sequences, and their consequences is important to the teaching and rearing of young children.

The reasons for behavioral changes in small children are based on the following three types of explanations:

(1) Biological explanations focus on physical maturation or genetic inheritance.
(2) Psychological explanations involve children's personalities and their needs, wants, motives and desires.
(3) Social explanations emphasize the impact of factors within the child's environment.

Our own development, and that of people around us, is better understood as our knowledge in child development increases. As parents and caregivers of children, the more we know about

child growth and behavior, the better our chances are for success in guiding, directing and encouraging children in their growth. Failure to meet the developmental needs of children in our care could result in disastrous consequences for the individual child, for the family, and, ultimately, for our society.

Major Theories of Child Development -- In A Nutshell!

In keeping with the handbook style, no attempt will be made to thoroughly explain the theories of child development. Rather a glimpse of what is meant by the role of theory in child development and a *nutshell* full of classification and stages for specific theories are presented here.

Developmental theories try to make sense of facts accumulated about children and to organize knowledge in a systematic way. Theories can be simple statements about why something happens, or elaborate and complex models of behavior that involve a great deal of information relating to a considerable age span. Both simple and complex theories can be used to explain past events and predict future behavior.

Major theories of child development are often divided into these categories:

- *Environmental theories.* Explanation of development that emphasizes the influence of learning and experience (e.g., Warson, Skinner, Bandura).
- *Epigenetic theories.* Explanation that emphasizes the developmental impact of genetics and maturation as these inborn factors are modified by the environment (e.g., Lorenz, Piaget, Freud, Erikson).

No single type of theory is best or most useful, because each individual theory provides a different set of explanations about behavior. Since the behavior of growing children is often determined by a multitude of factors, it is generally most productive to examine development from both the environmental and epigenetic perspectives.

The "nutshell" of points to know and remember about the major theories of child development is a summary of ideas helpful in understanding how and why children develop and behave as they do.

Gesell's biological-maturation theory. Development depends on nervous system maturation. Through h... ...dy of the developmental sequence of behavior, Gesell concluded that maturational changes in behavior were caused by the development of the nervous system. Gesell felt the child had to be "biologically ready" to acquire new responses and that practice or training had little effect on maturational rate. According to the Gesell theory of biological maturation, "a child does not *learn* to crawl, he *matures* to crawl. Development will not proceed until the child's nervous system is "ready" or sufficiently well developed to send and receive essential nerve impulses and to process incoming information. More recent research has provided increased support for the role of the environment in development.

Ethological theory. Humans develop behaviors that have survival value during periods when their systems are most likely to acquire these responses. Ethological theory emphasizes that responses, such as language and attachment to caregivers, are more easily acquired during critical periods in development, times when the organism's system is biologically ready for such learning to take place.

Freud's psychoanalytic theory. Personality and sexuality develop out of unconscious conflicts between the child's id, ego, and superego. Early experience is most influential.

In Freud's theory, the superego functions like a conscience, enabling the child to distinguish between right and wrong and "censoring" activities and thoughts. Thus, the superego helps maintain appropriate behavior even in the absence of parental authority. Freud described the superego as developing slowly over the first five years of life as the child becomes aware of the expectations of parents and of society in general.

Piaget's cognitive theory . This theory describes a series of orderly changes that take place in the way children think and solve problems. Piaget felt that children develop more efficient strategies for organizing information about their world as they mature, because their brains become better able to process and retain complex information. He also felt that cognitive skills such as reasoning, comprehension, and problem solving have survival value because they help the children adapt to their surroundings. Organization and adaptation through accommodation and assimilation are the processes Piaget felt were involved in cognitive development. Piaget's theory is organized into four stages of cognitive growth: the sensorimotor stage, which covers infancy; the preoperational stage, which focuses on two to seven-year-olds; the stage of concrete

operations, which encompasses the cognitive growth of seven to eleven-year-olds; and the stage of formal operations, which focuses on the cognitive abilities of adolescents and adults.

According to Piaget, all normal children progress through four stages of cognitive development. Like other epigenetic theorists, Piaget considered the order of these stages to be invariant, with progress from one stage to the next based on age or biological maturation. So, for example, children cannot use abstract reasoning before they can understand cause and effect. The understanding of cause and effect is age-related since it depends on the maturation of the nervous system and the cognitive structures. A child simply does not have the cognitive equipment necessary to reason at high levels until he or she is twelve years old or so. Young children incorrectly assume that they are the center of the universe and that all events happen to, for, or because of them. It is not until the school years that the child is capable of looking at situations from different vantage points and of reasoning that there are other driving forces in the universe besides themselves.

Erikson's psychosocial theory. Personality develops as children resolve discrepancies between their skills and society's expectations. Personality development is a lifelong process. Erikson focuses on the role of the person in society while Freud concentrates on early childhood conflict. Erikson believed that there was always hope of overcoming developmental problems encountered through proper care and attention.

Also Erikson believed that society plays a profound role in personality development. Therefore, his psychosocial theory emphasizes people's relationships with their social environments. He described different parts of the child's personality as developing at different times through a series of interrelated stages. At each stage, he identified a crisis or conflict requiring resolution. Some of these crises parallel the psychosexual stages identified by Freud. For example, during the oral stage of development, according to Erikson, the infant learns to trust or mistrust the caregiver; during the anal stage, the infant attempts to establish autonomy or independence. In resolving each of the crises or conflicts, the child develops a skill that will enable him or her to cope with the demands of society and establish meaningful relationships with others.

Erikson believed that a person's culture could facilitate or hinder crises resolution, and thus he saw culture as playing a major role in personality development. One's culture, for example, might encourage or discourage a sense of competence in males or females, or might impede or

reinforce the building of a strong personal identity. Therefore, Erikson would argue, we become the people we are in part by conforming to the expectations of society.

Learning through conditioning. In classical conditioning, children learn new responses by forming associations between new stimuli and stimuli that cause reflexes. In operant conditioning, behaviors followed by pleasurable results are repeated (and thus are learned) and those followed by negative consequences are avoided.

Operant conditioning is learned based on the formation of a new association between a stimulus and a response. In this case, the association is not between a reflex behavior and a new stimulus but between a particular behavior and the event that follows it. One learns in operant conditioning to behave in a certain way in accordance with the consequence of the action. *Reinforcement*, or a reward following the action, tends to make the behavior likely to occur. *Punishment*, on the other hand, discourages the behavior, making it less likely to occur. Thus, a child might work hard on her math in order to get a colorful sticker (a reinforcer). Conversely, a child might leave the dog alone because last time she bothered it, she was bitten (punishment). The late Harvard psychologist B. F. Skinner was the leading proponent of operant conditioning.

Learning through the observation of models. Social learning theory is an important variation of behaviorism. In social learning, one acquires responses by observing and imitating the behavior of others. Social learning theorists Neal Miller and John Dollard (1941) and Albert Bandura (1981) suggest that one is more likely to imitate the behavior of others if the behavior one sees is reinforced or if one likes or admires the individuals one observes. Both desirable and undesirable behavior can be learned through imitation. Thus, children might learn to shoplift or engage in other petty crime because the peers they admire do. On the same principle, others might study science to become astronauts because they idolize Sally Ride, the first American woman in space.

Social learning has a powerful effect on behavior. Because both emotion and behavior can be imitated, social learning theory has been used in the treatment of behavior disorders, including intense, irrational fears, called phobias (Bandura 1969). For example, people with snake phobias can learn to approach and handle snakes by watching and imitating the behavior of others. Social learning theory also serves to explain the acquisition of sex-role behavior and aggression.

The Impact of Learning Theory. Learning theory encourages psychologists to look for the causes and consequences of children's behavior in the external environment rather than in the children's minds. According to learning theorists, such problems as shyness, fear of school, speech difficulties, temper tantrums, and aggression can often be corrected by changing the reinforcement that maintains such behavior. The principles of learning theory can be applied by professionals and lay people alike; no special setting for treatment is required. Behaviorists work in schools, hospitals, homes, playgrounds, and factories, helping people change their behavior by altering their environments. In many cases, the results they obtain are remarkable.

Part of the success of learning theory is due to its precise formulation. Unlike epigenetic theories of development, which hypothesize internal processes, learning theory provides an empirical framework in which behavior can be observed and measured. It encourages psychologists to define terms precisely, to identify specific behavioral goals, to apply procedures systematically, and to test the validity of their findings objectively. Through learning theory, psychology advanced as a science, just as behaviorist John B. Watson hoped it would. However, the methodology of learning theory has been criticized for being too simplistic and mechanized and for failing to account for important but unobservable influences such as thoughts, wishes, needs, and internal motives.

In a "nutshell" we have reviewed some important points and concept summaries of child growth and development. The more we learn about behavioral expectancies, the better we can understand why Danny cries for his mother more than the other children do, why Rachel becomes hyperactive when she "dresses up" in the dramatic play center, and that Billy may just be two years old and acting his age of maturity.

CHAPTER 2

Infancy to Toddlerhood

In the beginning of life, a child has specific needs that must be met in order for him to mature in a wonderful way. Parents and caregivers of infants must be responsive to these needs. Advocates of early infant stimulation believe that the cognitive capacity of any child can be improved by interaction designed to teach infants learning fundamentals while they are growing more rapidly (Harris 1986). A controversial advocate of early infant stimulation is Glen Doman, founder of the Better Baby Institute in Baltimore, Maryland. Doman feels that any "normal" child can learn to be gifted and offers programs to encourage the development of geniuses. World-renown psychologist Burton White (1967) has noted that too much early stimulation may overwhelm infants -- who then behave "wickedly" and spend most of their time crying. White suggests that stimulation be increased gradually to minimize distress while encouraging skills.

About Babies

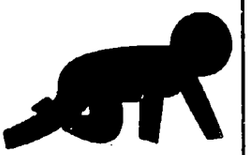
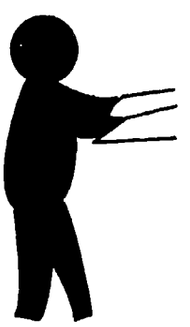
The normal child masters an impressive list of motor accomplishments during infancy and toddlerhood. Although unable to lift up its chin at birth, the infant does not remain helpless for long. The state of physical maturation is often called readiness and is the focus of Arnold Gesell's biological maturation theory. The child's ability to perform voluntary motor tasks depends on his readiness, or the level of maturation attained by skeletal, muscular, and nervous systems. Gesell and his colleagues considered physical readiness the most important determinant of progress in motor development.

Table 2.1 (Harris 1986) on the following pages gives the caregiver an opportunity to review steps of normal locomotor development.

Table 2-1.a *Milestones in infant locomotor development*

Age (mo)	Age (wk)	HEAD CONTROL	SITTING POSITION	ROLLING OVER AND CRAWLING	STANDING ERECT	STEPS TO FIRST STEPS
		When lifted from supine position the normal newborn shows a complete lack of head control. As the infant's neuromuscular system matures, control becomes greater.	The average term infant doubles his weight between birth and 5 months. During this period, signs of maturation, such as head control and straightening back, are seen in the sitting position.	The righting response is composed of a series of reflexes developing along the body axis from head to buttocks. As time passes, the activity becomes purposeful and is accompanied by leg and arm activity that produces movement.	Here is shown the development of control over antigravity muscles used to assume an erect posture.	By supporting an infant in an erect posture, development of posture, balance, and effort to take steps may be observed.
1	4	 *1-4 WEEKS* There is complete head lag when pulled to sitting position.	*First 4 WEEKS* The back is uniformly rounded -- there is absence of head control.	Makes crawling or swimming movements when on stomach.		
2	8		*4-8 WEEKS* There is a rounded back and the head is held up intermittently.	 Moves arms and legs together on one side of the body.		
3	12	*8-10 WEEKS* At this stage, head lag is still apparent, but not complete.	*8-12 WEEKS* The back is still rounded. Baby is now raising head well, but tends to bob forward. Knees are flexed. Can sit for 10-15 minutes if propped.	 *Up to 14 WEEKS* The newborn infant is unable to turn from back to stomach. Turning the head does not affect the rest of the body.	 *Up to 14 WEEKS* The newborn exhibits distinctly passive response to efforts to pull him upward past a sitting position.	*Up to 14 WEEKS* From birth to about 14 weeks, posture in supported position is generally limp. Some infants rest no weight on their feet.
4	16					
5	20	*16-20 WEEKS* Now there is only slight or no head lag when pulled up. Turns head in all directions.	*16-20 WEEKS* The back is straighter. Baby holds head erect without wobbling. Birth weight is nearly doubled. Can sit for 30 minutes if well supported.	Rolls from stomach to back. Pushes with hands and flexes knees when on stomach.	*16-24 WEEKS* As development begins in the lower extremities, the infant exhibits an urge to push upward. He raises the buttocks, but cannot sustain this position.	
6	24			 *28-28 WEEKS* The infant turns his face to the side and toward the back. The shoulder raises and the spine curves. Legs and arms are carried toward the side. A complete roll is accomplished (back to stomach). Crawls (lies on stomach and pulls self ahead with arms.)		*16-24 WEEKS* Head is more in line with body plane; upper and lower limbs are less lame. Mechanisms controlling posture appear to advance more rapidly than those governing progressive movements. Stamps foot, support most of weight in standing position.
7	28	*24-28 WEEKS* At this point, baby lifts head spontaneously from supine position.	Sits with slight support; pulls self to sitting position. Sits well-balanced on a chair.			

Table 2-1.b *Milestones in infant locomotor development*

Age (mo)	Age (wk)	HEAD CONTROL	SITTING POSITION	ROLLING OVER AND CRAWLING	STANDING ERECT	STEPS TO FIRST STEPS
		When lifted from supine position the normal newborn shows a complete lack of head control. As the infant's neuromuscular system matures, control becomes greater.	The average term infant doubles his weight between birth and 5 months. During this period, signs of maturation, such as head control and straightening back, are seen in the sitting position.	The righting response is composed of a series of reflexes developing along the body axis from head to buttocks. As time passes, the activity becomes purposeful and is accompanied by leg and arm activity that produces movement.	Here is shown the development of control over antigravity muscles used to assume an erect posture.	By supporting an infant in an erect posture, development of posture, balance, and effort to take steps may be observed.
7	28		 Sits alone steadily and briefly. Pushes self into sitting position.	Rocks in crawling position. Creeps (moving forward on hands and knees) unsteadily at first. Pivots from side to side on stomach.		
8	32		Sits alone steadily; bounces.			*26-30 WEEKS* Postural adjustment is much the same as in previous phase, but up and down movements and stamping may be seen. Some stepping movements may be observed. Supports weight well when leaning on furniture. Pulls self up on furniture.
9	36		Sits alone for long periods of time.	*34-38 WEEKS* Early rolling appears more involuntary than deliberate. Spinal extension is still the major initial movement. If near the edge of a bed or table, the infant shows no awareness of it. He might roll off. Creeping and crawling well coordinated.	*36-44 WEEKS* As capacity increases, the infant extends his lower extremities and attains a somewhat erect posture. However, a vertical position usually cannot be achieved.	Walks around furniture(cruises). Pulls self to feet when helped. Stands alone briefly.
10	40		Lowers self to sit.			*40-48 WEEKS* Stepping and postural adjustment are more evidently deliberate at about 36 weeks. Some support is needed. Walks holding on to two hands. Cruising continues. Pulls self to stand. Lifts one foot when standing.
11	44					
12	48					
13	52			*48-52 WEEKS* The infant begins to use the act of rolling to complete some deliberate performance. He may flex the legs and raise the abdomen in order to creep or push into a sitting position. He shows some tendency towards adjusting to his whereabouts. Prefers to crawl.	*48-52 WEEKS* Erect, vertical position is finally accomplished. Movements are made with effort.	Stands by self. Walks around small objects when someone holds one hand.
15						Loses balance with sudden stops. Jumps in place; falls forward often.
18						Walks sideways and backwards. Pushes furniture when walking; pulls pull toy. Runs awkwardly and falls often.

Milestones in motor skill development are demonstrated in Table 2.2 (Harris 1986). Developmental landmarks in early infant perception are demonstrated in Table 2.3 (Flake-Hobson 1983).

Table 2.2 *Milestones in Motor Skill Development*

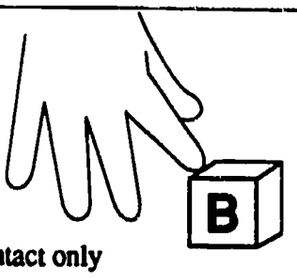
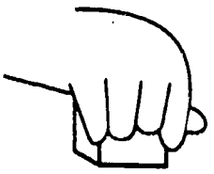
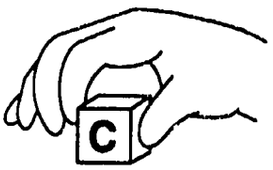
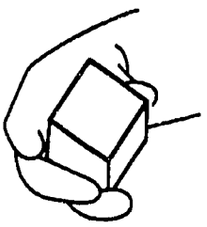
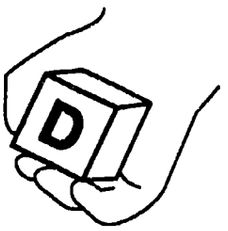
	Age in months (approximate)		
	2 - 3	4 - 5	5 - 7
Prehension	 No Contact	 Contact only	 Hand grasp
Locomotion	 Chest up	 Sit on lap Grasp object	 Sit alone
	Age in months (approximate)		
	9 - 10	11 - 12	12 - 15
Prehension	 Superior forefinger grasp	 Forefinger grasp	 Superior palm grasp
Locomotion	 Walk alone	 Pull to stand by furniture	 Creep

Table 2.3 *Developmental Landmarks in Early Infant Perception*

Age	Capability
Neonatal Period	Sound-vision-motor linkages -- indicated by turning head and eyes toward sounds. Tracks movement of objects and people. Discriminates mother's smell from smell of others.
1 month	Recognizes different speech sounds.
2 months	Has two-color vision. Begins to respond to relationships among parts -- not just the parts themselves.
3 months	Has binocular vision and peripheral vision. Recognizes mother's face from a photograph. Hears and imitates a variety of high-pitched and low-pitched sounds.
4 months	Links mother's voice with her face and the sounds of a familiar object with the actual object. Discriminates mother's and father's voices from a stranger. Discriminates between objects in upright and nonupright positions. Discriminates between flat pictures and three-dimensional objects.
5 months	Discriminates different nonupright positions -- such as upside down from sideways.
6 months	Discriminates mother's face from that of a stranger. Achieves size constancy.
6 1/2 months	Prewired visual-motor system is activated to aid in depth perception as infants begin crawling.
8-10 months	Achieves shape constancy.
10-12 months	Recognizes objects by touch -- without looking at them. Discriminates by touch between familiar and new objects in the dark.

Major developmental characteristics in vision, hearing, and feeding are important benchmarks for infant caregivers to know. The tables and listings in this handbook should be studied by new employees. Parents are pleased to see these tables laminated and posted in the infant laboratory to reassure them that caregivers know what they should about infants. The following developmental characteristics listing could be used for parent/teacher training (Harris 1986).

Developmental Milestones Associated with Feeding

Birth

- Sucking, rooting, and swallowing reflexes present
- Cries when hungry; falls asleep when full

1 month

- Tongue thrust reflex is strong when spoon is placed in child's mouth

3-4 months

- Can take food from a spoon - extrusion reflex fading

5 months

- Can move lips to the rim of cup

5-6 months

- Can use fingers in self-feeding

6-7 months

- Bites and chews
- May hold own bottle but may also prefer to be fed

7-9 months

- Displays food preferences (refuses food by keeping lips closed)
- Can hold a spoon but cannot use it in feeding
- May drink from a cup with help
- May be able to drink from a straw

9-12 months

- Prefers eating with fingers
- Holds own bottle and drinks from it
- Holds a cup but spills some of the liquid
- Uses a spoon with much spilling

Major Developmental Characteristics of Vision

Birth

- Pupil adjusts to light intensity (pupillary reflex) and the child blinks
- If the head is rotated to one side, the eyes follow slowly (doll's eye reflex)
- Can focus momentarily on moving object 8-10 inches away

4 weeks

- Very interested in human face
- Tear glands begin to function

6-12 weeks

- Has a peripheral vision to 180 degrees
- Both eyes are working well together (binocular vision)
- Eyes move together to focus on close objects (convergence)
- Doll's eye reflex disappears

12-20 weeks

- Objects and people responded to as familiar (i.e., bottle, primary caregiver, etc.)
- Looks at hands while sitting or lying on back
- Focuses on mirror image of self

20-28 weeks

- Develops eye-hand coordination (grasping well established; can move objects from hand to hand)
- Prefers more complex visual stimuli
- Pats image of self in the mirror
- Prefers reds and yellows
- Adjusts posture to see an object

28-44 weeks

- Can focus on very small objects
- Depth perception becoming apparent

44-52 weeks

- Can follow rapidly moving objects

Major Developmental Characteristics of Hearing

Birth

- Startles when loud noise sounded
- Orients to the sound of a human voice
- Low-pitched sounds (a lullaby or heartbeat) have a quieting effect

8-12 weeks

- Turns head to side when sound is made at ear level

12-16 weeks

- Localizes sound in environment by turning head and looking for sound source

16-24 weeks

- Can localize sounds made above or below the head by turning head to the side and looking up or down

24-32 weeks

- Responds to own name

32-52 weeks

- Responds to some words as though their meanings are understood (i.e., "no" and the names of family members)
- Controls response in reaction to sound (i.e., listens for the sound to occur twice before responding)

- Although bottlefeeding is the dominant mode in the United States, breastfeeding is gaining

Table 2.4 depicts the growth and development during infancy (Whaley-Wong 1982).

Table 2.4.a *Growth and Development During Infancy*

Age (weeks)	Physical	Gross Motor	Fine Motor	Sensory
Birth	Weight gain of 5 to 7 ounces weekly for first 6 months Height gain of 1 inch monthly for first 5 months Head circumference larger than chest circumference Primitive reflexes present and strong Nose breather	Marked head lag, especially when pulled from lying to sitting position Holds head momentarily parallel and in midline when suspended in prone position Can turn head from side to side when prone, lifts head momentarily from bed Makes crawling movements when prone When held in standing position, body limp at knees and hips	Hands predominantly closed Grasp reflex strong Hand clenches on contact with object	Able to fixate on moving object Follows light to midline Quiets when hears a voice
4	Crawling reflex disappears	Less head lag when pulled to sitting positon	Hands frequently open	Binocular fixation and convergence to near objects beginning
8	Fontanels closing	Can maintain head in same plane as rest of body when held upright When prone, can lift head almost 45 degrees off table When held in sitting position, head is held up but bobs forward Assumes less flexed position when prone - hips flat, legs extended, arms flexed, head to side	Grasp reflex fading	When supine, follows dangling toy from side to point beyond midline Visually searches to locate sounds Turns head to side when sound is made at level of ear

Table 2.4.b *Growth and Development During Infancy*

Age (weeks)	Physical	Gross Motor	Fine Motor	Sensory
12	Primitive reflexes fading	Able to hold head more erect when sitting, but still bobs forward Only slight head lag when pulled to sitting Assumes symmetric body positioning Able to raise head and shoulders from prone position to a 45- to 90-degree angle from table: bears weight on forearms When held in standing position, able to bear slight fraction of weight on legs Examines hands when on back	Grasp reflex absent Hands kept loosely open Actively holds rattle, but will not reach for it Clutches own hand, pulls at blankets and clothes	Follows object to periphery (180 degrees) Locates sound by turning head to side and looking in same direction Begins to have ability to coordinate stimuli from various sense organs
16	Drooling begins Moro, tonic neck, rooting, extrusion reflexes have disappeared	Almost no head lag when pulled to sitting position Balances head well in sitting position Able to raise head and chest off couch to angle of 90 degrees Assumes predominately symmetric position Rolls from back to side Back less rounded Able to sit erect if propped up	Tries to reach object with hand but overshoots Grasps object with both hands Plays with rattle placed in hand; shakes it, but cannot pick it up if dropped Can carry objects to mouth Inspects and plays with hands; pulls clothing or blanket over face in play	Able to focus on near objects Binocular vision fairly well established Can focus on 1/2-inch block Beginning eye-hand coordination
20	Growth rate may begin to decline Beginning signs of tooth eruption	No head lag when pulled to sitting position When sitting, able to hold head erect and steady	Able to grasp objects voluntarily Uses palmar grasp, bidexterous approach	Visually pursues a dropped object Smiles at mirror image

Table 2.4.c *Growth and Development During Infancy*

Age (weeks)	Physical	Gross Motor	Fine Motor	Sensory
20 cont.	Able to breathe when nose is obstructed	Able to sit for longer periods when back is well supported Back straight When held in standing position, able to bear most of weight Can turn over from abdomen to back Puts feet to mouth	Plays with toes Takes objects directly to mouth Holds one cube while regarding a second	Able to sustain visual inspection of an object Can localize sounds made below the ear
24	Birth weight doubled Weight gain of 3 to 5 ounces weekly for next 6 months Height gain of 1/2 inch monthly for next 6 months Teething may begin with eruption of two lower central incisors Chewing and biting occur	When prone, can lift chest and upper abdomen off table, bearing weight on hands When about to be pulled to a sitting position, lifts head Sits in high chair with back straight Rolls from back to abdomen When held in standing position, bears almost all of weight	Resecures a dropped object Drops one cube when another given Grasps and manipulates small objects Holds bottle Grabs feet and pulls to mouth	Adjusts posture to see an object Prefers more complex visual stimuli Can localize sounds made above the ear Will turn head to the side, then look up or down
28	Eruption of upper central incisors	When prone, bears weight on one hand Sits, leaning forward on both hands Sits erect momentarily Bears full weight on feet When held in standing position, bounces actively When supine, spontaneously lifts head off table	Transfers objects from one hand to the other Unidexterous approach and grasp Holds two cubes more than momentarily Bangs cube on table Rakes at a small object	Can fixate on very small objects Responds to own name Localizes sound by turning head in a curving arch Beginning awareness of depth and space Has taste preferences

Table 2.4.d *Growth and Development During Infancy*

Age (weeks)	Physical	Gross Motor	Fine Motor	Sensory
32	Begins to show regular patterns in bladder and bowel elimination Plantar reflex disappears	Sits steadily unsupported Readily bears weight on legs when supported, may stand holding on Adjusts posture to reach an object	Beginning pincer grasp using index, fourth, and fifth fingers against the lower part of the thumb Releases objects at will Rings bell purposely Retains two cubes while regarding the third cube Secures an object by pulling string Reaches persistently for toys out of reach	
36	Eruption of upper lateral incisor may begin	Crawls, may progress backward at first Sits steadily on floor for prolonged time (10 minutes) Recovers balance when leans forward but cannot do so when leaning sideways Stands holding onto furniture Pulls self to standing position	Ability to use thumb and index finger in crude pincer grasp Preference for use of hand is evident Grasps third cube Compares two cubes by bringing them together	Localizes sounds by turning head diagonally and directly toward sound Depth perception increasing
40	Neck-righting reflex disappears Labyrinth-righting reflex is strongest	Crawls by pulling self forward with hands Can change from prone to sitting position Pulls self to sitting position Stands while holding onto furniture, sits by falling down Recovers balance easily while sitting	Crude release of an object beginning Grasps bell by handle	

Table 2.4.e *Growth and Development During Infancy*

Age (weeks)	Physical	Gross Motor	Fine Motor	Sensory
44	Eruption of lower lateral incisors may begin	Creeps with abdomen off floor While standing, lifts one foot to take a step	Can hold crayon to make a mark on paper Explores objects more thoroughly (i.e., clapper inside bell)	
48		May creep with soles of feet flat on floor When sitting, pivots to reach toward back to pick up an object Walks holding onto furniture or with both hands held	Neat pincer grasp Drops object deliberately for it to be picked up Puts one object after another into a container (sequential play) Able to manipulate an object and remove it from tight-fitting enclosure	
52	Birth weight tripled Birth length increased by 50% Head and chest circumference equal Has total of six to eight deciduous teeth Babinski's reflex disappears Lumbar curve develops Mouthing and drooling begin to cease	Walks with one hand held May attempt to stand alone momentarily Can sit down from standing position without help	Releases cube in cup Attempts to build two-block tower but fails Tries to insert a pellet into a narrow-neck bottle but fails Can turn pages in a book, many at a time	Discriminates simple geometric forms (i.e., circle) Can follow rapidly moving object Controls and adjusts response to sound; will listen for sound to recur

Baby Talk Summarized

- During the first year of life, growth in height and weight is unparalleled except during the prenatal period and adolescence. By the first birthday, infants grow half again as tall as they were at birth and triple their birth weight. Body proportions change and skills are acquired according to the cephalocaudal and proximodistal principles of development.

- The baby's skeleton continues to ossify during infancy. Muscles increase in size and strength but the digestive system remains immature. Babies rely on maternal antibody transfer and artificial immunization to fight infection and are able to regulate body temperature by the time they are eighteen months to two years old. Lung capacity increases during this time as does endurance and stamina.

- Of all the body systems, the brain and nervous system grow most rapidly. Nerve cells increase in number and complexity and the process of myelinization continues at a rapid rate.

- Teething generally begins around six or seven months of age. A full set of twenty deciduous teeth is generally acquired by age six or seven.

- Progress in motor development depends on maturation and experience. Walking is the major locomotor accomplishment; reaching and grasping are examples of fine motor skills acquired during infancy.

- Hearing and touch are the infant's most well-developed senses. Vision is less well developed than the other senses, but infants can perceive motion, attend to contrast, and seem predisposed to look at the human face. Color vision, depth perception, and object constancy also develop during this time.

- Sleep requirements decrease with age. The sleep/wake pattern begins with a series of naps, which are consolidated into continuous nighttime sleep accompanied by one or two naps during the day. Bedtime rituals make sleep easier for the infant to accept. Both REM and NREM sleep can be observed from birth.

in popularity. Both methods have advantages and disadvantages. Weaning usually occurs between six and twelve months of age. It may be accompanied by thumb or finger sucking.

- The infant requires a well-balanced diet to support the dramatic physical growth that occurs during the first three years of life. Careful monitoring of both the quality and quantity of food is necessary to avoid dietary deficits or under or over feeding. As growth rate slows after the first birthday, appetite may decline.

- Toilet training can begin after the child has acquired voluntary bowel and bladder control.

Good Feelings

"During the first two years of life, all children appear to have a special need to establish a strong attachment to one or more older humans. In the process, they begin to become social animals. By two years of age, we have found that all children have acquired a personal social style. By two, a child can become spoiled. I have never seen a spoiled one-year-old, but I have seen many a spoiled two-year-old.

As concerns the first seven months of life, I believe the story is much simpler. Erik Erikson, the famous personality theorist, called the primary social goal of this period a sense of 'trust'. I believe this term is an appropriate one. The frequency and degree of discomfort a baby feels depends largely on the kind of treatment he receives. Some discomfort is inevitable. There is no way to prevent a fair amount of unhappiness from such factors as hunger, indigestion, teething, or a wet diaper. On the other hand, you can easily see how such unhappiness can be prolonged and allowed to escalate if the avoidable discomfort is not dealt with promptly.

Fortunately for most babies, especially those reared at home by their parents, loving care and attention is the rule. However, I have found some people quite confused about the issue of spoiling an infant. There are those who believe there is a benefit to be derived by letting a baby 'cry it out'. Personally, *I do not believe you can spoil a baby*

in the first seven months of life. I strongly suggest you respond to your baby's crying in a natural way." (White 1975)

Burton White, Harvard psychologist has had a great amount of influence on infancy and toddlerhood during the past two decades. His comments concerning spoiling the child is one that child caregivers will want to heed. Children CANNOT be spoiled in the first seven months of life. It is very important that the infant-caregiver ratio is sufficiently small to support the hours of nurturing and caring that must exist in the baby center. Babies must be attended.

However, there may be times when nothing you can do will comfort the baby. Such moments will be difficult to endure, but you must expect them from time to time. Age-old practices like holding and rocking the infant work remarkably well, regardless of possible inconvience. The mechanical swings on the market today seem to be a comforting device for many babies. Of course, the pacifier can be a lifesaver. Burton White's research reports no bad effects for children's teeth in regard to use of the pacifier. Although some infants have a bit of initial trouble mastering the art of holding the mouth, it works well for most. I believe you should feel free to make use of a sterilized pacifier as soon as the baby will accept it. Be sure to check the child continually for safety. Babies have been known to chew the end loose, usually due to a faulty pacifier.

No requirement of good child-rearing is more rewarding than the tending of a baby in a loving and attentive way.

Teaching and Amusing the Baby

Brooke M. Beebe has written a terrific book entitled Best Bets for Babies (1987) that has some ideas to share with caregivers. The ideas in the following checklist have been adapted from her publication.

Babies -- Games, Toys and Amusements Checklist

General Observations:

Don't inundate baby with too many toys. She will better appreciate each one if she has only a few at a time. Rotate toys as soon as the baby becomes bored with the selection.

Avoid toys that are too advanced for the baby. He'll only be frustrated by them, and then he might not be able to enjoy them when he does learn to use them correctly.

Always use good sense when it comes to judging the safety of toys. In addition, consider the following points:

- Don't let a child play with anything smaller than her fist.
- Avoid sharp corners, points and edges.
- Avoid any toy with small parts that can break off and be swallowed.
- Make sure surfaces are painted with nontoxic, lead-free paint.
- Avoid toys that are not easily washable.
- Avoid anything breakable.
- Make sure stuffed toys can't easily be torn and stuffing removed.
- Cloth toys should be flame-resistant. Be sure to follow their washing instructions; the wrong washing procedure will reduce the flame-retardant properties.
- Strings should not be longer than twelve inches. (Always be on the lookout for anything that can wrap around a baby's neck.)
- Beware of old rattles that might be badly constructed. There are now safety standards for these toys.

Amusements:

Babies love to try to dig crinkly paper out of a closed hand.

When baby grabs your nose, say "Honk, honk!" - she'll love it! But warn relatives and baby-sitters; she'll be grabbing their noses and expecting honks!

Fake sneezes are most amusing.

Even babies as young as four or five months love simple rhymes you can make up. Just include their names and repeat familiar words.

Babies love to play with necklaces - especially when you're wearing them. Make a necklace of string and large beads, and let baby grab to her heart's delight.

A scarf game is fun at around six months. Drape a scarf around your neck, hold one end, and put the other in baby's hand. If he pulls, move toward him. He's learning that his action creates a reaction. Then gently move away and he'll see the scarf slip through his fingers.

Sit across from baby, hold his hands, and say "Give me a happy face" and make a huge grin. Then say "Give me a sad face" and pretend to cry. Do this for all the emotions you can think of - anger, disappointment, hurt, silliness, etc. Then, when you do each one again, ask baby to do it, too. After a week or so, baby will try to mimic your faces.

Squirt shaving cream on a washable surface and let baby finger paint. (Use whipped cream or chocolate pudding if she insists on putting fingers in her mouth.)

Empty egg cartons can be used for holding paint colors; just throw them away when playtime is over.

Babies love knee games and finger games. The repetition of simple words mesmerizes them, while the surprise endings delight them. Make up your own rhymes and games. Keep them simple and sign them with love. Your baby will get the message. Use some of the commercial books listed in the suggested readings. For a baby under three months, hang a toy out of reach and let it swing back and forth.

For a baby between four and ten months: put her in a high chair and let her play with a few large ice cubes. (Remove them before they can become a danger.)

Show home movies; parents may be willing to provide these.

Show textures, colors and shapes to a toddler by helping him paste a variety of objects onto a colored piece of paper. Collecting the materials from home will be half the fun. Choose from the following list, or have parents choose whatever they can find around the house.

- straw
- pictures of familiar objects in magazines
- gold and silver stars
- an adhesive bandage
- sand, salt or sugar (dropped on glue)
- uncooked macaroni
- pieces of fabric
- leaves and twigs
- pieces of ribbon
- junk mail enclosures

Hang mirrors or mirrored tiles at baby's eye level in places where she is likely to see them often. Babies *adore* mirrors! (Take all safety precautions.)

Unusual and fascinating are music boxes with dancing figurines and pendulum cuckoo clocks.

Get some children's records from the library and play them often. Baby might not pay attention to them for a long time, but suddenly he'll start recognizing the songs. So don't give up if he doesn't tune in to them right away.

Set up a tent outdoors on grass and let the babies spend some time crawling in and out of it.

Nothing entertains a baby more than older children. Arrange times with teachers of these older children to visit the babies and toddlers.

Homemade Toys:

A long sock with buttons (or colorful adhesive tape) for eyes makes a wonderful puppet, especially when you push the toe inside to form a "throat". Babies love to see blocks and other toys disappear inside the "throat."

A plastic hanger with small colorful objects hanging from it is the simplest mobile to make. Change the hanging objects often.

Parents may provide pictures of child's friends. Glue the prints onto a piece of very stiff cardboard. Then cover the hole thing with clear, pressure-sensitive paper. Babies also enjoy pictures of themselves, of their parents, and of animals.

Store-Bought Toys:

Some rattles are really too narrow to fit comfortably in a baby's hand. Check this before you buy.

Babies love inflatable toys that are big but light.

Although some children never play with or enjoy stuffed animals, keep three or four small ones in the crib. Put them at either end and she'll probably snuggle up against them in her sleep.

A dog's ball with a bell inside is more interesting than any other ball.

The plastic pop-up toys that feature pop-up cartoon characters are great, but *test* the one you buy. They often stick and can be very frustrating.

Keeping It All Together:

Toy chests are attractive, but their heavy lids are dangerous. Smaller, open boxes or plastic wastebaskets or wicker baskets are better, and they're easy to cart around from room to room.

Brightly painted wooden soda crates hung on a wall make attractive cubbies for holding small toys.

Shoe bags made of transparent plastic are great for holding toys; everything is always visible. Hang one on the outside of a playpen to keep all those small toys organized.

Fix or discard broken toys as soon as they break.

Keep a lost and found box (a shoe box will do) for toys. When a small part of a larger toy becomes detached and you don't have time to search for the missing part, just drop the toy into the box. You can make the repair when the rest of the toy turns up and there is time to reassemble.

Use a rake periodically to get all of baby's toys into one place. It's marvelous for a quick cleanup.

Designate one drawer as each baby's drawer and fill it with her toys or with household objects that parents may provide to amuse her, such as empty plastic bottles, key rings, old decks of cards, etc.

When introducing baby to a swing, try putting him in only when he's in a cheerful mood. If he gets put in when he's fussy or crying, he may learn to hate the swing. Later on, when you know he enjoys swinging, it can be used to pacify him.

Be careful: baby swings can be tipped over, especially by active older children.

Great Expectations: A Summary of Infant/Toddler Social Behavior

0-1 Month

- Watches parent's face intently as she or he talks to infant

2 Months

- Social smile in response to various stimuli

3 Months

- Much interest in surroundings
- Stops crying when parent enters room
- Recognizes familiar faces and objects, such as feeding bottle
- Aware of strange situations

4 Months

- Demands attention by fussing; becomes bored if left alone
- Enjoys social interaction with people
- Anticipates feeding when sees bottle
- Shows excitement with whole body, squeals, breathes heavily
- Shows interest in strange stimuli

5 Months

- Smiles at mirror image
- Pats bottle with both hands
- More enthusiastically playful, but may have rapid mood swings
- Able to discriminate strangers from family
- Vocalizes displeasure when an object is taken away

6 Months

- Recognizes parents; begins to fear strangers
- Holds arms out to be picked up
- Has definite likes and dislikes
- Beginning of imitation (cough, protrusion of tongue)
- Excites on hearing footsteps
- Laughs when head is hidden in a towel
- Briefly searches for a dropped object (object permanence beginning)

7 Months

- Increasing fear of strangers; shows signs of fretfulness when mother disappears
- Imitates simple acts and noises
- Tries to attract attention by coughing or snorting
- Plays peekaboo
- Demonstrates dislike of food by keeping lips closed
- Exhibits oral aggressiveness in biting and mouthing
- Demonstrates expectation in response to repetition of stimuli

8 Months

- Increasing anxiety over loss of parent, particularly mother, and fear of strangers
- Responds to word "no"
- Dislikes dressing, diaper change

9 Months

- Parent (mother) is increasingly important for own sake
- Increasing interest in pleasing mother
- Begins to show fears of going to bed and being left alone
- Puts arm in front of face to avoid having it washed

10 Months

- Inhibits behavior to verbal command of "no-no" or own name
- Imitates facial expressions, waves bye-bye
- Extends toy to another person but will not release it
- Looks around a corner or under a pillow for an object
- Repeats actions that attract attention and are laughed at
- Plays interactive games, such as pat-a-cake
- Reacts to adult anger, cries when scolded
- Demonstrates independence in dressing, feeding, locomotive skills, and testing of parents
- Looks at and follows pictures in a book

11 Months

- Experiences joy and satisfaction when a task is mastered
- Reacts to restrictions with frustration

12 Months

- Rolls ball to another on request
- Anticipates body gestures when a familiar nursery rhyme or story is being told (for example, holds toes or feet in response to "This little piggy went to market")
- Plays game up-down, "so-big", or peek-a-boo, by covering face
- Shakes head for "no"

13 Months

- Shows emotions such as jealousy, affection (may give hug or kiss on request), anger, fear
- Enjoys familiar surroundings and will explore away from mother
- Fearful of strange situation, clings to mother
- May develop habit of "security blanket" or favorite toy
- Unceasing determination to practice locomotor skills

15 Months

- Tolerates some separation from mother
- Less likely to fear strangers
- Begins to imitate parents, such as cleaning house (sweeping, dusting, folding clothes)
- Feeds self using cup with little spilling
- May discard bottle
- Manages spoon but rotates it near mouth
- Kisses and hugs parents, may kiss pictures in a book
- Expresses emotions, has temper tantrums

18 Months

- Great imitator ("domestic mimicry")
- Manages spoon well
- Takes off gloves, socks and shoes and unzips
- Temper tantrums may be more evident
- Beginning awareness of ownership ("my toy")
- May develop dependency on transitional objects, such as "security blanket"

24 Months (2 years)

- Stage of parallel play
- May have imaginary playmate
- Has sustained attention span
- Temper tantrums decreasing
- Pulls people to show them something
- Increased independence from mother
- Dresses self in simple clothing

30 Months (2 1/2 years)

- Separates more easily from mother
- In play, helps put things away, can carry breakable objects, pushes with good steering
- Begins to notice sex differences; knows own sex
- May attend to toilet needs without help except for wiping

36 Months (3 years)

- Dresses self almost completely if helped with back buttons and told which shoe is right or left
- Buttons and unbuttons accessible buttons
- Pulls on shoes
- Has increased attention span
- Feeds self completely
- Pours from a bottle or pitcher
- Can prepare simple meals, such as cold cereal and milk
- Can help to set table, dry dishes without breaking any
- Likes to "help" entertain by passing around food
- May have fears, especially of dark and going to bed
- Knows own sex and appropriate sex of others
- In play, parallel and associative phase; begins to learn simple games and meaning of rules, but follows them according to self-interpretation; speaks to doll, animal, truck, and so on; begins to work out social interaction through play; able to share toys although expresses idea of "mine" frequently
- Attempts to please parents and conform to their expectations
- Is less jealous of younger sibling; may be opportune time for birth of additional sibling
- Is aware of family relationships and sex role functions
- Boys tend to identify more with father or other male figure
- Has increased ability to separate easily and comfortably from parents for short periods

A List of Characteristics for Two-Year-Olds

The well-adjusted two-year-old usually:

- feels comfortable and content
- makes a great companion
- likes to do errands (fetch a book)
- speaks of himself by given name ("Johnny wants")
- approaches and touches whatever attracts him (and almost everything does)
- explores everything by taste and smell
- learns quickly at her level
- gets into drawers and cabinets
- makes messes whenever possible
- adapts to nursery school better than a younger child.

Learning to Say NO and Meaning It

Babies could teach a course on negative behavior. The stage of negativism begins as babies phase into toddlers. Negativism is a perfectly normal stage in the second half of the second year of children (White 1975). For the first time, the child is beginning to be aware of the fact that he is an independent entity.

- He will start to use his own name.
- He will start to be very possessive about his toys and clothes.
- He will start to resist simple directions.
- He will test his will against yours.
- He will find that the word or concept NO has a particular fascination to him, and he uses the word NO frequently.

Face Savers - Some Toddler Techniques

A power-struggle with a two-year-old is self-defeating. While children of this age should be introduced to responsible behaviors (picking up after oneself, saying "I'm sorry"), expectations must be realistic. When a caregiver realizes the child is unable to follow through in obeying a command or rule, the adult models helpfulness and loving behavior by taking care of the

situation discreetly. Good face-saving techniques include:

Say,"Let's do so and so," and then, if need be, you can do the major part of the work yourself.

"How about doing so and so?" is also good. If his answer is "No," so be it. You can give up on the whole thing without embarrassment.

"We'll go out to play just as soon as we have picked up." Again, going out to play is the behavior stressed, and if you have to do most of the picking up yourself, your failure to get his compliance is not too conspicuous.

"Where do the blocks go?" -- when it is pickup time -- may motivate the child to put them where they belong. If he doesn't, no matter.

A good face-saving technique, *after* a child may have refused, is to make a joke or some humorous remark. Or, change the subject or leave the scene completely.

Terrible and Lovable Two-Year-Olds

The two-year-old is a child whose language development can be rather remarkable and extensive. One child may have the capacity to understand and express hundreds of words and use correctly all the major grammatical forms, while another child's development of language skills may be quite limited. Two-year-olds exhibit a wide variety and range of attitudes and developmental behaviors. With respect to curiosity, she can arrive at age two with well-nourished, broad, and extremely healthy inquisitiveness, or may have tragically lost quite a bit of that spontaneous motivating force.

It is important that caregivers understand the complexity of the two-year-old's social development. Social style, for most children, seems to have become very well established by the time he is two years of age. Two-and-a-half can be a rather stormy age socially. But with help, almost any two-and-a-half-year-old can meet with some degree of social success.

CHAPTER 3

Preschool Years -- Stormy to Sunny

Just as the world has its seasons, human behavior has its predictable growth patterns. "Good" times alternate with "bad" times. Somewhere around three years of age, the child's persistent "no" transforms slowly into a "yes." He smiles instead of frowns, laughs instead of cries, and gives in comfortably to your requests instead of resisting them.

All Through the Threes

A different quirk that often occurs for the three-year-old is the stage of reliving babyhood, of discovering his own past. The child may pretend he is a baby, and revert to baby talk; he will say things like "I can't walk, I'm a little baby, and I want a bottle."

Most three- and three-and-a-half-year-olds begin to develop a rather good self concept. There is little question that this sense of self is influenced by the way others treat them. It is the prime time for teachers, parents and caregivers to utilize their best techniques for developing a positive self-image.

Dr. Arnold Gesell has described three as a "coming of age, a time at which the many strands of previous development converge, and a new self comes into focus." The three-year-old seems, for all his relative immaturity, to be rather highly aware of what other people like and dislike. In fact, many seem quite able to tell whether another person is happy or sad, or pleased or angry, by watching that person's face. At any rate, most three-year-olds want to please. It is a great age to teach.

The three-year-old has it better than the three-and-a-half-year-old. The three-year-old has a strong motor basis. He is nimble on his feet. For the most part, he is a happy person and language means a great deal to him. While three is a conforming age, three-and-a-half is just the opposite, emotionally. The three-and-a-half-year-old may start to suck his thumb, bite his nails, pick his nose, rub his genitals, and chew on his clothes.

Moving on at Four

Four-year-olds are highly versatile and very funny little people. If you can accept him as such you will share in the joy he feels. Often his joyous, exuberant, energetic and ridiculous traits are misunderstood by care-giving adults. Boasting, swearing and attempting daring feats demonstrate his expansion of self. The four-year-old has discovered that the adult can surely be challenged. He has discovered that little tricks can be played and perhaps go unnoticed or undisciplined by the attending adult. Combining ventures of the mind and body reward him with a surge of power. The typical four-year-old loves adventures, excursions, excitement, and almost anything new.

Teaching a four-year-old can be most rewarding, as they are so very appreciative of new experiences. Ample opportunities to teach new information, arrange delightful learning experiences and share new books, toys and games can fill the days with happiness for both child and teacher.

"The typical four-year-old is very speedy. Each thing he does, he does quickly, including moving from one interest to the next. For the most part, he does a thing once and that's enough." (Ames and Ilg 1976)

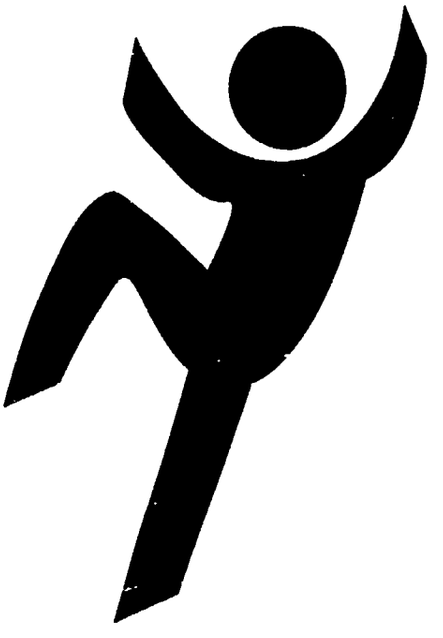
Four-year-olds are not interested in perfection and exhibit fluid behavior and imagination. The

fluidity of the four's imagination can be seen in drawings. Ilg gives an example of a four-year-old starting a drawing with a tree, spontaneously turning the tree drawing into a house, which turns into a battleship.

It is no wonder that adults have to stay on their toes to keep up with speedy, fluid, fanciful fours. It seems that four's expansiveness is sometimes a little too much even for him. At any rate, he likes and respects boundaries and limits, which he does not always find within himself. It is up to the adult to understand and respect the four's need for definement of expectations in a "matter-of-fact" way. Verbal restraints, such as "you may go as far as the fences" or "it is a rule that you do (or do not do) so-and-so" are useful. Most children seem to seek regularity and rules in their environment.

A healthy, pleasant, and vigorous child of this age may seem "out-of-bounds" in almost every area of living. As to motor expression, he not only hits and kicks and spits (if aroused) but may even go so far as to run away from home if things don't please him. Whether he is happy or not, his motor drive is high. He races up and down, and dashes here and there on his trusty tricycle. (Ames and Ilg 1976)

Emotionally, he seems somewhat out-of-control as he tends to laugh almost too hilariously when things please him. Also, he howls and cries most loudly when things don't suit his expectations. Four's can act extremely silly. And, be assured he will exaggerate. For instance, he has learned enough language to enjoy the exotic use of description, especially in terms of numbers and size. Four-year-old's descriptions typically include,"huge houses,"



"billion bugs," "my tricycle is better and newer," "my father is stronger than your father." Such boasting goes along with their interest in examining and studying situations.

The transition from the extremely exuberant four-year-old to age five tends to be rather gradual. Age five is known for being calm, collected, quiet and self-contained, adaptable, conforming, well-adjusted, easy to get on with, happiest and most comfortable while engaged in conversation. The four-and-one-half to five-year-old presents a child having some or most of these new behavior traits.

Children at this age enjoy each other so very much that playtime bec es extremely joyful. Now friendships may be quite positive and based on share activities rather than on the exclusion of some unwanted other. Cooperation, sharing, and taking turns now tend to come quite easily to most. When interest diminishes or quarrels begin in group play, the adult may need to intervene to settle disputes or offer something new if play has bogged down.

Friends become important to this age child. The teacher can stimulate friendships by introducing a new child, "Here is your friend who wants to play with you." There are many opportunities to teach about friendship through reading stories about friends, taking turns, and sharing toys.

Almost every child goes through all of the various stages of development. However, as at any age, an important warning. *DO NOT TAKE TOO SERIOUSLY WHAT ANYBODY TELLS YOU ABOUT HOW A SPECIFIC CHILD SHOULD BEHAVE.* Child behavior, for all reasonably normal children, develops in a highly patterned way. Stages of more mature behavior follow those of less mature behavior in a remarkably predictable manner. But, if a four-year-old has not reached a stage yet, you should not feel that you have cause to worry as age norms are only *averages.* An individual child may quite normally be ahead or behind these averages.

Five and Alive

The five-year-old enjoys life and looks consistently on the sunny side. "Today is going to be great," he may tell you as he awakens. Or even more comprehensively, "I want to be good all of the time and not do anything wrong because I want to get an ice cream" -- or for no particular reward. The five-year-old has matured into a sunny disposition. He is very accomodating to adults if he has had an emotionally secure five years. He uses new positive language such as "sure", "I just love ...", and "all right". It seems as if he is almost too good. Such goodness will not last forever. The five- and five-and-a-half-year-old:

- lives very closely to the here and now, giving little thought to the past or future, but has a good memory;
- cares very much about his room and his things, his neighborhood, and his home;
- is quieter than when he was four;
- has an amazing ability to judge what he can and cannot do;
- has a new ability to protect himself from over-stimulation;
- is usually not a worrier;
- is satisfied with self;
- has a strong sense of family ;
- likes to take little responsibilities; and
- is expansive intellectually.

The five-and-a-half-year-old may develop an all-too-great readiness to disobey as he is getting closer to six. As he moves toward six, he is characteristically hesitant, dawdling, and indecisive, or the opposite -- over-demanding and explosive. The healthy five-year-old sometimes becomes a sickly five-and-a half to six-year-old: his feet hurt, his face hurts; he has earaches, stomachaches, headaches, and colds.

More Preschool Characteristics

As a child develops, she generally passes through stages that have been called equilibrium -- a state of balance and good judgment, when a child is better able to relate to others -- and disequilibrium -- a state of difficulty and poor adjustment, when he is introverted and working for himself. Unfortunately, a child cannot go from one good stage to the next without a breakup between.

Yet, there is no way to be sure when a youngster will reach a certain stage or how long it will last. One five-year-old may move more quickly into the calm and friendly stage, while another is still stuck in the four-and-a-half-year-old "unpredictable" level. Development does not follow an exact chronological pattern. That is because the stages of behavior are like flights of stairs; one must be climbed before a child reaches the level required to begin the next flight.

Typically, these characteristics occur in these stages (Ames and Ilg 1976, 1979):

3 years: Here comes a brief spurt of goodness. Little three's tend to be friendly and compliant, cooperative and conforming. This child wants to please.

3 1/2 years: Physical and emotional behavior go haywire. Preschoolers may tremble, stumble, twitch and stutter. At three, a child worked with you; now he works against you. Routine has become difficult, and he wants to have his own way.

4 years: Your four-year-old loves adventure and excitement, which he will show through wildness, defiance and naughty language. He will begin to exhibit excessive behavior like laughing too loud and using bathroom language like "poo-poo head."

4 1/2 years: An unpredictable age, sometimes a child behaves excessively; at other times, he is quiet and compliant. He can be demanding and is concerned with what is real and what is not.

5 years: The five's are quite cheerful and accommodating. The parent is the center of her world, and she does her very best to please them.

5 1/2-6 years: A most difficult period. The youngster tends to be bold, defiant, contrary and self-centered. He has difficulty making choices and cannot stick with a decision.

Physical Growth During the Preschool Years

1. Growth rate slows.
2. Weight increases five-six pounds per year (on the average); muscle and bone tissue are gained while fat is lost.
3. Height increases two-three inches per year (on the average); growth is concentrated in the legs and trunk.

4. Internal systems slow and stabilize.
5. Activity level decreases.
6. Twenty baby teeth are present by age two-and-a-half or three.
7. Bladder control improves; more nighttime than daytime "accidents" are usual.
8. Stomach is half its adult capacity.
9. Brain grows from seventy-five percent to ninety percent of its adult size between the ages of two and five; myelinization continues; handedness is established by age four; and lateralization is developing.

Charting Gross Motor and Fine Motor Behaviors for the Three-, Four- and Five-Year-Olds

Table 3.1 *Gross Motor Behaviors Typical of Three-, Four- and Five-Year-Olds*

Activity	3 Years	4 Years	5 Years
Walking and running	• Walks a line without watching feet • Walks backward • Runs smoothly; turns sharp corners and stops suddenly	• Heel-toe walk • Skips clumsily • Runs easily	• Walks backwards with heel-toe pattern • Skips • Runs with skill, speed, and agility; plays games simultaneously
Stepping	• Climbs upstairs, alternating feet	• Walks downstairs alternating feet • Climbs stairs without holding rail. • Hops on one leg	• Hops well
Balance	• Balances on one foot for a few seconds	• Balances on one foot for five or more seconds	• Balances on alternative feet with eyes closed
Throwing	• Throws ball overhand • Catches ball with arms fully extended about a third of time	• Reliably catches ball thrown at five feet • Throws ball overhand	• Throws and catches ball well • Uses hands more than arms to catch ball
Jumping	• Jumps off bottom step • Jumps in place		• Jumps down three or four steps, lands on toes • Jumps rope
Other	• Pedals tricycle • Pumps a swing	• Climbs a jungle gym	• Rollerskates

Table 3.2 *Fine Motor Accomplishments of the Preschool Period*

Activity	3 Years	4 Years	5 Years
Dressing	• Undresses self, helps dress self • Undoes buttons on side or front of clothing	• Dresses/undresses self, except tying bows, closing zippers, putting on boots • Buttons • Laces shoes but cannot tie bow • Distinguishes front from back	• Dresses self without assistance • Ties shoelaces
Self-care	• Washes hands, feeds self • May brush own teeth	• Brushes teeth alone	• Washes self with less splashing of clothes
Writing & Drawing	• Recognizes and draws a complete circle • Draw crude cross • Tries to draw picture and name it • Scribbles	• Recognizes and draws crude square • Combines two simple geometric forms • Draws crude three-part person • Traces a cross and a diamond • Form and meaning in drawings are apparent to an adult	• Copies triangle and diamond • Prints a few letters or numbers crudely • Can combine more than two geometric forms • Draws six-part person • Draws recognizable lifelike representations; differentiates parts of drawing • Prints some letters correctly • Prints first name • Knows there is a right and left side but cannot distinguish between them • Has a definite hand preference
Play	• Pours fluid from pitcher with occasional spills • Hits large pegs on board with hammer • Begins to use scissors • Strings large beads • Does puzzles by trial and error • Places pellets in narrow-necked bottle • Builds tower of nine to ten blocks • Builds three-block gate/ bridge	• Likes water play • Uses scissors to cut on a line • Enjoys fine manipulation of play materials • Surveys puzzle before placing pieces • Matches simple geometric forms • Has poor space perception • Builds complicated structures extending vertically and laterally • Builds five-block gate • Notices missing parts -- requests to fix	• Likes water play • Uses hammer to hit nail on head • Uses scissors and tools (such as a screwdriver) well • Folds paper diagonally • Does simple puzzles quickly and smoothly • Builds things out of large boxes • Builds complex three-dimensional structures

Table 3.3 *Play Activities and Equipment Suitable for the Preschool Age Child*

	3 Years	4 Years	5 Years	Purpose
Gross motor play	• Swings • Slides • Tricycles • Sandbox • Wading pool • Wagons	• Rope ladders • Jungle gym • Swimming • Trapeze	• Roller skates • Ball playing • Bicycle with training wheels	• Develop and refine gross motor skills
Creative play	• Sand play • Water play • Playdough and clay • Finger painting • Large blocks • Musical toys	• Crayons and chalk drawing • Easel painting • Rhythm band • Simple puzzles	• Cutting pictures • Carpentry tools • Simple sewing and handcraft • Puzzles	• Promote the motor coordination; encourage self-expression
Dramatic play	• Block building • Farm animal toys • Dolls • Dollhouses • Trucks, cars, planes • Toy phones	• Dress-up clothes • Group play • Housekeeping toys • Store-bought toys (nurse and doctor kits) • Wooden boxes	• Paper puppets • Handkerchief puppets • Large wooden and cardboard boxes • Pedal cars and trucks	• Encourage use of imagination; teach children about social role
Quiet play	• Books--fairy tales • Nursery rhymes and stories • Children's records	• Books--fairy tales and adventures	• Books about adventures of real people and animals • Selected television programs	• To limit activity or involve the child passively
Games	• Where is Thumbkin? • Mulberry bush • Clapping games • Eentsy-weentsy spider	• Simon Says • Dog and Bone • Two little blackbirds	• Bean bag throw • Skip tag • Ball play • Hide and seek	

Socialization During the Preschool Years

Preschoolers understand that others have feelings that may be different from their own, and they can use this knowledge when they react to others (Flavell 1977). Preschool-age children may offer a toy or physical comfort like a hug when they sense another person is distressed. The range of their understanding varies within socialization stages and reflects the child's individual personality as well as the social, emotional, intellectual and physical environment.

The following points on socialization during the preschool years have been adapted from Sutton-Smith, B., *Play and Learning* (1979).

The family:

1. Children establish a partnership with their parents, showing less dependency and a greater ability to give and take in interactions.
2. In general, fathers interact more with preschoolers than with infants.
3. Siblings influence each other's behavior; parents can increase or decrease positive interactions between siblings.
4. The loss of a parent through divorce or death is particularly traumatic for the preschooler, whose behavior, intellectual functioning, sex typing, and self-control may be affected.
5. Stepfamilies provide new interactions with adults and stepsiblings.

Peers:

1. Most peer interaction occurs within a school or playtime context.

Other adults:

1. Children are more likely to interact with unfamiliar adults during the preschool years.
2. Contact with adults may occur within a school setting.

Television:

1. Parents often use television to keep children occupied.
2. Television may provide education and entertainment.
3. Some content may provide models of aggression.
4. Advertisements influence children's food and toy preferences.
5. Television may provide information about sexuality.

Emotional development:

1. Fear
   a. No other period of development is so heavily marked by fear.
   b. Fears may be acquired or innate.
   c. Girls tend to report more fears than boys.
2. Anger and aggression
   a. Anger is provoked more by peers than parents after the age of three.
   b. Temper tantrums are less likely and verbal and physical aggression are more likely expressions of frustration and anger during the preschool years.
3. Empathy: recognition of emotions
   a. Happy and sad are easier emotions to recognize in others than frightened or angry.
   b. Preschoolers assume they cannot feel two emotions at once.
   c. They assume that others respond with the same emotions as they do.

Patterns of Play

In a classic study of peer interaction, Mildred Parten (1932, 1933) described five ways children play in the presence of others:

1. Solitary play. The child plays alone and independently with toys, sometimes within speaking distance of other children but appearing not to notice them and making no effort to communicate or share with them.
2. Onlooker play. The child spends most of the time watching other children play. He or she often talks to the others, asking questions and giving suggestions, but does not participate.
3. Parallel play. The child plays beside but not with another child. Both children play with similar toys though their activities are unrelated.
4. Associative play. The child plays with another child. The two talk about common activities and borrow and loan toys. Each child acts alone, however, since the two do not share a goal.
5. Cooperative play. The children play together and help each other in an activity that produces some material product or achieves some goal. There is a division of labor and shared goals.

Preoperational Thought Leading to Language Development

Language is developed as the mental growth processes and equilibrium balance. It cannot be stressed too often that a child's environment greatly affects his language development. Below are some general characteristics of preoperational thought (Piaget 1963).

Characteristics of Preoperational Thought (Ages 2-7):

1. Symbolic thought. Using mental imagery, language, and memory to represent concrete objects and events.
2. Egocentrism. Representing experiences in reference to the self. Egocentrism is manifested through animism, finalism, magical thinking and difficulty in seeing how the world looks and feels to others.
3. Centration. Focusing attention on one aspect of the situation while ignoring all others. Centration is manifested through problems in understanding transformation in conservation tasks and through irreversibility of thought.
4. Concreteness. Focusing on the tangible, observable aspects of people and objects.
5. Reasoning.
   a. Preschoolers presume cause and effect if two events or attributes are closely associated (concatenative thinking).
   b. They make generalizations from one particular instance to another (transductive reasoning).
   c. They assume that occurrences are associated only with a specific set of circumstances (i.e., it rains only in the mountains).
6. Concept acquisition.
   a. One-to-one correspondence is completely understood by age six or seven.
   b. Preschoolers have difficulty thinking of numbers as having specific values.
   c. They have trouble understanding the passage of time and gradual change.
   d. They do not understand the concept of age.
   e. They do not understand that length and distance is unaffected by the direction of movement.
   f. They do not understand that distance and time may be unrelated (they assume a long trip covers a large distance).
7. Classification skills.
   a. Preschoolers have difficulty sorting objects according to some common feature.
   b. They cannot consistently order objects from largest to smallest, for example, even though they can identify the end points of classification.
   c. They have difficulty understanding the relationship of parts to a whole or that one item might belong to several subsets.

Language Development

These principles pertain to language development in the preschool period:

1. Vocabulary grows from fifty words at age 2 to 8,000-14,000 words by age 6.
2. Sentence length increases from three words at ages 2-3 to six-eight words by ages 5-6.
3. Taboo words may appear in the child's vocabulary, especially if they cause extraordinary reactions from the parents.
4. Preschoolers can form questions, but have trouble answering "why", "how", and "when" questions.
5. They can use negatives but do not follow all the grammatical rules for them.
6. They overregularize verbs and nouns until they learn the correct irregular forms.
7. They have difficulty using and understanding sentences in the passive voice.
8. They have difficulty making accurate comparisons.
9. They can form complex sentences with more than one clause.
10. They use tag questions to make requests.

Best Bets for Understanding the Preschool Years

- During the preschool period, the child is able to process more information internally and to use thought instead of action to learn about the world. Piaget refers to the stage of cognitive development that extends from age two to age seven as the preoperational stage. In this stage, the ability to think logically is affected by the child's egocentrism (the tendency to look at situations from his or her own perspective) and by centration (the tendency to focus on one dimension of a situation, ignoring all others). Egocentrism can be demonstrated through perspective-taking tasks such as Piaget's Three-Mountain Task. The preschool child connects unrelated ideas in an effort to explain cause and effect, and generalizes the outcome to other situations. The child is also influenced by the temporal sequencing of events, assuming that events occurring close together in time are causally related.

- Preschoolers are able to form concepts or build cognitive categories to help them organize and understand new information. Children acquire some understanding of numbers and quantity, time, and distance during this age period. Sorting or classifying objects, ordering objects in a series, and time sequencing are skills that develop late in the preschool period.

- Language and thought are two highly interrelated skills. It is not clear, however, whether thought precedes language development or whether cognitive development and language development are interdependent. Through verbal mediation, language translates thoughts into behavior.

- The Stanford-Binet Intelligence Test and the Wechsler Preschool and Primary Scale of Intelligence (WPPSI) are two of the most commonly administered intelligence tests for children. These tests are usually used to pinpoint learning deficits. Genetics, personality, parent/child relations, caregiving style, and situational variables all influence IQ test results.

- Vocabulary is acquired at a rapid rate during the preschool period. Sentence length and the use of questions, negatives, and irregular verb and noun forms also advance during this time. Preschool children rely on word order when interpreting the subject and object of a sentence and sometimes make mistakes regarding who did what to whom, especially when the passive voice is used. They use comparative terms such as *less* and *more* and *big* and *little* inconsistently. Young children can incorporate conjunctions such as *and* and *because* in their speech but use temporal terms such as *until* and *before* less often. Tag questions or requests for information often appear in the speech of preschool-age children.

- Egocentrism and concreteness are also reflected in the child's speech. Articulation problems associated with preschool speech usually disappear with maturity and verbal practice. Stuttering is common when children are learning the language; delays in language acquisition may be due to such environmental factors as lack of practice or such epigenetic factors as maturational rate.

- Children adjust the volume and composition of their speech and use gestures to help ensure that they will be heard and understood. Conversational turn-taking develops during the preschool period; listening skills also improve.

- Bilingualism involves speaking and understanding two languages. The most common second language for American children is Spanish. By age seven, the bilingual child can keep the two languages separate. Language learning and cognitive development are not affected by bilingualism.

- Black English is a dialect of standard English with its own grammar and sentence structure.

- Both Piaget and Kohlberg have studied the development of moral judgment, or the ability to decide between right and wrong. Piaget found that although three to five-year-old children believe that rules are absolute and unchangeable, they play their own versions of games, modifying the rules of play when necessary. By age seven or eight, children agree on a set of rules for play at a particular time, and try to follow those rules as consistently as possible. He also found that as far as preschoolers are concerned the naughtiest actions are those that cause the most damage, no matter what the actor's intentions were. Preschoolers may tell lies to avoid punishment, as an expression of a wish, or to embellish a story. From the preschooler's perspective, stealing something costly is naughtier than stealing something inexpensive.

- Kohlberg divides moral reasoning into three stages: the preconventional level, the conventional level, and the postconventional level. Most preschoolers are at the preconventional level, which means they are motivated to avoid punishment and to satisfy their needs.

- Learning theorists believe that moral reasoning develops through the reinforcement, punishment, identification, and modeling provided by parents and other socializing agents. The parenting style the parents adopt -- authoritative, authoritarian, or permissive -- influences the child's moral behavior.

- Psychoanalytic theory suggests that fear, guilt, and anxiety about losing a parent's love play an important role in the development of a conscience -- the portion of the personality that guides moral decision making. Also, identification with the same-sex parent helps the child internalize the family's standards of conduct. Different disciplinary strategies are suggested by the different theoretical approaches, the most effective of which involve reasoning.

- Parents and caregivers can help children learn the fundamentals they need for reading and writing by encouraging them to use language competently and to develop good listening skills.

- Anger may be provoked by frustration or disputes with playmates. Conflicts with parents play a lesser role in the provocation of anger after age three. Anger may be expressed verbally or physically.

- Preschoolers can empathize with others and can recognize when others are happy or sad. Anger and fear are more difficult emotions for the preschooler to recognize.

- Preschoolers are curious about appearance differences and about how their bodies work. Parents are advised to answer questions about sexuality in an honest, straightforward manner.

- Individual variation in behavior is great during this age period. A behavior is problematic only when it is persistent and interferes with the normal routine.

- Growth rate during the preschool years is slower and steadier than in infancy, with muscles and bones accounting for most of the weight gained. The preschooler grows taller and becomes more slender between the ages of three and six. Heart rate, respiration rate, metabolism, blood pressure, and body temperature stabilize during the preschool years. A full set of twenty baby teeth are usually present by age three. Because the child is still growing, muscles and bones are more prone to damage than those of older children. Daytime bladder control is achieved by most preschoolers, although bedwetting may occur at night, especially for boys.

- Although activity level decreases in the preschool period, hyperactivity is a common behavioral disorder that may be diagnosed at this time. The causes and treatment of hyperactivity are controversial, however (see pages 69-72).

- The brain continues to grow rapidly throughout the preschool period, achieving ninety percent of its full weight by the time the child reaches age five. Hand preference is established by age four although brain lateralization is not complete at that time.

- Large- and small-muscle skills continue to develop according to the cephalocaudal and proximodistal principles of growth. Arms and legs are the focus of motor development during the preschool years (i.e., skipping, climbing, throwing, cutting, and drawing are

common activities). Fine motor skills are more difficult to master because of the precision they demand.

- The preschooler is normally farsighted because of the immature shape of the eyeball. The ability to process visual information at a distance, to coordinate vision with the other senses, and to try to interpret patterns and forms improves with age. Children with perceptual handicaps such as blindness can be helped to explore the world safely.

- Hearing plays an important role in language acquisition. Untreated middle-ear infection is the most common cause of hearing loss among this age group.

- The preschooler may be particularly taste-sensitive because more taste receptors are present during this period than at maturity.

- Most preschoolers need about twelve hours of sleep a day to function efficiently. Preschoolers are particularly disturbed by frightening television programs and may incorporate such material into dreams. Naps are usually abandoned after age three.

CHAPTER 4

School Age: The Child's Expanding World

Body, Mind, and Spirit

School-age children, six to twelve years old, grow at a slower physical rate. The growth is steady. The daily calorie intake is not as high as in the preschool years. Their bodies are storing important nutrients that will be needed for adolescent development and growth. Expanding the range of understanding and learning so many new concepts during these years can transform young lives dramatically.

Keys for successful development of school-age children are important for caregivers and teachers to know. If a key is used successfully, the child's world will expand into a place of splendor and joy. Even children in the most horrendous and vulnerable family lifestyles may blossom in this precious time if a loving, caring and knowing adult becomes their mentor or teacher.

After-school childcare has increased dramatically during the last two decades. The abundance of working parents provides great opportunities for expanding childcare functions. Some family day homes, private/public centers, and civic groups are building curricula to address the physical, emotional and intellectual needs of children atttending after school.

Understanding what six to twelve-year-old children are about and what they like is very important. The child's equilibrium continues to develop. In the preschool years, disequilibrium caused by rapid growth tends to trigger uneven behavior, alternating with a calmer disposition about every one-half year. As the child approaches seven years old, a longer period between growth spurts occurs.

T. Brazelton, M.D., suggests the adjacent step-by-step graphic of the milestones distributing equilibrium and disequilibrium during childhood (Figure 4.1).

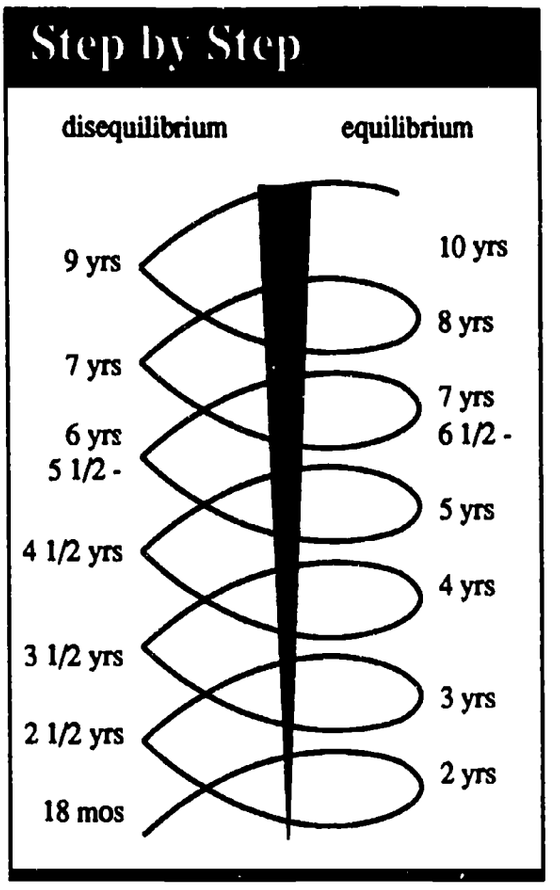


Figure 4.1 *Milestones distributing equilibrium and disequilibrium during childhood*

Although the definite causes of behavior changes are unknown, the changes seem to occur as a child's nervous system develops. According to Herman T. Epstein, stages of rapid brain growth are followed by stages of little or slowed growth. Unpredictably, these stages of slow brain growth coincide with the periods of disequilibrium. Therefore, behavioral changes may be related to normal neurological development (Ames 1990).

By understing the more difficult ages, the caregiver can work out effective techniques to deal with them. Ames suggests the following approaches:

5 1/2-6 years: Change the subject when things get difficult. Try counting--tell him you expect him to comply by the time you count to ten. Give several chances; most six-year-olds, having expressed rebelliousness, will obey on the second or third try. Above all, give praise.

7 years: Show moderate sympathy for your child's anxiety, but don't go overboard. Since his memory is short, if you want him to do something, warn him, remind him and then check to see that he has done it.

8 years: Set aside short periods when you can devote yourself totally to your eight-year-old. Remain calm when she emotes and carries on. Appreciate that she enjoys her own dramatizations.

9 years: Let your preadolescent test the waters of independence. Don't lean on him. Step back; give him some freedom, within reason.

It helps to realize that most of a child's worrisome behavior is not anybody's fault, but a normal part of growing up, and to keep in mind "This, too, shall pass."

Table 4.1 lists some of the developmental characteristics of children from five to seven years of age. These are the transition years from preschool to school. Psychologists have found that both teachers and parents are anxious about a child's school readiness. Sometimes, their expectations are quite unrealistic and if they do not understand and support the child in this time of great transition, the child's self-concept may be marred.

Table 4.1.a *Developmental characteristics of children ages 5-7.*

Self Development

	AGES 5-7
1. Emotions	• Expresses feelings freely, often in extreme form (fear, joy, affection, anger, shyness, jealousy) • Inhibition of aggression developing • More accepting and comfortable with separation from parents • Adult reassurance of competence and basic worth essential • Frequent assurance of being loved is important • Sense of humor expressed in riddles, practical jokes, nonsense words
	AGES 5-7
2. Values	• Has sense of duty and accomplishment • Developing conscience is in evidence; resulting behavior may be rigid and expressed in extremes, e.g., all right or all wrong • Beginning to accept that there are rules, but does not understand the principles behind them
	AGES 5-7
3. Self	• Clarifies differences between adult and children's world • Achieving independence in physical self care • Gaining practical knowledge necessary for everyday living • Exploration is becoming more goal directed • Learning to forego immediate reward for delayed gratification

Physical Development

AGES 5-7

- Girls ahead of boys in physical development and physical achievement
- Small muscle and eye-hand coordination developing
- Increasingly skillful in handling tools and materials
- Physical skills are beginning to be important in influencing status among peers and in developing a positive self-concept
- Is able to draw a recognizable human figure
- Continued high energy level
- Masters physical skills necessary for game playing
- Ready for beginning reading

Thinking, Language Development

AGES 5-7

1. Thinking

- Differentiates more clearly between fantasy and reality
- Attention span by age seven shows dramatic lengthening: has ability to shift attention
- Concepts largely functional; two things are alike because they occur together or serve the same purpose, e.g., spoon and fork alike because you eat with them
- Can order objects on dimensions of size and quantity
- Memory good for concrete sequences (numbers, letters), can remember more than two ideas for a short time. By age seven, spontaneous categorization of sights and sounds facilitates remembering. Memory for information enhanced when informed presented in a meaningful context.
- Is able to give more thought to judgments and decisions

2. Language

- Learning that words and pictures represent real objects
- Relates tales of present and past events
- Vocabulary comprehension mostly concrete, e.g., words that represent objects and activities
- Understanding of language greater than ability to use language
- May use language aggressively
- Adults should be aware of language difficulties which impede communication and may require remediation
- Can verbalize similarities and analogies

Table 4.1.b *Developmental characteristics of children ages 5-7.*

What is the 6 to 9-year-old Child About?

The early school years are very important. The child establishes lifelong skills and patterns which can have great influence on her future.

New adventures are in store for the six to nine-year-old child. School, teachers, friends, hobbies and activities become part of his life. As children learn new things, they often revert to old behaviors. Youngsters this age may reassert their independence, challenge adults, demand equal treatment and develop an extreme sense of fairness (i.e., the old "eye for an eye" approach). Caregivers and teachers, be aware that these six to nine-year-olds are growing, maturing and learning to develop their own unique charm and individuality! As six to nine-year-olds mature physically, they may experience:

- slower growth,
- an increase in weight,
- improved coordination,
- difficulty reading small print, and most definitely,
- increased skills.

In many ways, school opens the world to six to nine-year-olds. As their mental skills develop, children begin to:

- understand concepts;
- reason through the idea of cause and effect;
- improve language skills;
- think more logically;
- become concerned with "good" and "bad;"
- read, write and do arithmetic;
- become reliable;
- learn how to gain approval;
- think ahead; and
- show individuality.

Starting school is very exhilarating and very important. During that time:

- behavior patterns are established;
- feelings of anger, frustration and anxiety may arise to master new skills;
- nervous habits such as fidgeting may appear as children adjust to sitting in class for long periods;

- opinions and attitudes toward school are formed; and
- a new sense of independence grows.

If there are learning problems, they can usually be detected during the elementary school years. The child's emotional development can be challenging to parents, caregivers and teachers. Early in the stage, a child may become very emotional with frequent mood swings, demanding and inflexible, daring and ready to try anything new, and more likely to lie, cheat or complain. At any time, worries, especially about personal safety, are common. The child may require a great deal of reassurance about unreasonable fears at this time in life. He needs to be taught to cope with difficulties. Gradually, the child will learn to deal with emotions in public and show self-control. She is beginning to consider others' feelings.

Teachers, parents and caregivers must set good examples if they expect children to adjust to emotional changes. Teach him how to solve his problems by sharing your personal experiences. Be aware of signs of depression, changes in weight, appetite, sleep, interests, energy level and the ability to concentrate. Depression may lead to problems such as poor self-esteem or school failure.

Children begin confiding in other children from six to nine years old. As their interests expand and their bodies become better coordinated, they enjoy new toys such as a bicycle or a construction set. These and other developmental points are denoted as very important for those designing and implementing after-school childcare.

Bye-Bye Childhood: 9 to 12 Years Old!

Preteens, children nine to twelve years old need assistance to mature emotionally and intellectually. This is another amazing age of child development. Physical changes are taking place, such as:

- Rapid growth: usually lasting one year, occurs in girls from age ten to thirteen, boys about two years later. Girls are often taller and heavier than boys the same age. Also, girls are more mature and self-assured than boys.
- Permanent teeth have replaced baby teeth. Bone growth is incomplete. Eye-hand coordination is very good.

- Puberty: Hormones cause menstruation and breast development in girls, sperm production in boys; growth of pubic and body hair; voice and skin changes.
- Curiosity about sex increases. The body becomes capable of sexual reproduction.

Preteens struggle for independence. Conflicts between adults, especially parents, often occur as there is less family reliance. Adults need to become very good listeners. They must set reasonable limits and teach children how to reject self-destructive behavior (such as taking drugs). These children need some privacy and freedom but they also need help in learning to solve problems.

Most preteens are beginning to be affected by their peer relationships; their emotional development is characterized by their:

- seeking social approval,
- being more honest,
- caring about others,
- developing a conscience,
- fearing social rejection,
- being overly critical, and
- becoming fairly responsible.

Good health is promoted by helping a child develop a positive self-image by showing her care, respect and acceptance. Boys and girls are very conscious of their "new looks" and need to be assured that different rates of growth are normal. Adults need to encourage friendships which are based on mutual acceptance, helping preteens to resist peer pressure.

Preteens think more abstractly. For example, they can do more complicated math, enjoy greater creativity in the arts and social sciences, solve problems, appreciate different viewpoints and complete long-term assignments in school. They can handle homework. After-school caregivers can be of great assistance in the latter.

After-school care also offers a great time for relaxation and play, including team and singular sports. As preteens develop athletic skills and enjoy the freedom and enthusiasm of games, some injuries are bound to occur. Table 4.2 cites risks and injuries for preschool children and preteens (Galton 1981).

Table 4.2.a *Risks and Injuries Associated with Six Major Team Sports*

Sport	Associated Injuries	Strategies to Prevent Injury
1. Baseball (contact sport) *Comment:* Most injuries are caused by the ball, which may be traveling as fast as 70 mph.	Frequency of injury: (8-15 years) Arms 39 percent Head 38 percent Legs 19 percent Trunk 4 percent Proportion of injuries per position: Batters 22 percent Runners 17 percent Catcher 16 percent Outfield 14 percent On-deck hitters 7 percent 2nd Base 6 percent Pitcher 5 percent 1st Base 5 percent 3rd Base 5 percent Shortstop 5 percent Miscellaneous 3 percent	Restrict number of innings child can pitch. Discourage prolonged practice and excessive throwing. Eliminate steel spikes (use soccer-type instead). Eliminate sliding or use breakaway base. Eliminate on-deck circle and keep players in dugout. Use face protectors (attached to batting helmets). *Conditioning:* Lightwei[illegible] training. Wind sprints (running full out for 10-15 yards; stop; repeat). Side-stepping exercises. Backward and forward running exercises.
2. Basketball (contact sport)	Lower extremity (especially ankle) because of prolonged running. Rate of injury for boys 16/100; girls are more often injured but are also in poorer condition at the beginning of the season.	Preseason conditioning. Warm-up and stretching exercises.
3. Football (collision sport) *Comment:* Football has a high injury rate compared with other contact and noncontact sports.	Two hundred and thirty thousand persons receive emergency room treatment each year for football-related injuries. In eight years (1971-1979), there were 1129 serious football injuries (high school and college teams). Average injury rate: 15 percent. The most serious injuries involve the head and neck.	Helmet and facemask protection. Since 1976 National Federation of State High School Associations prohibits use of head blocking and face tackling. Mouthpieces. Soccer-type cleats. Pads (hip, kidney, shoulder, rib, tailbone, knee, and thigh). Preseason conditioning, warm-up, and stretching exercises.

Sport	Associated Injuries	Strategies to Prevent Injury
4. Gymnastics (noncontact sport) *Comment:* Gymnastics has a high rate of injury compared with other noncontact sports, but the injuries tend to be less serious.	Trampolines are the major source of injury (especially head and neck trauma). Nineteen thousand persons receive emergency room treatment each year for trampoline injuries.	Avoid the trampoline. Proper conditioning, warm-up, and stretching exercises.
5. Soccer (contact sport) *Comment:* Soccer has a low injury rate; it also doesn't favor any sex, body type, or age.	Type of injury: 39 percent blisters, skin abrasions 36 percent bruises 20 percent sprains, strains 5 percent fractures	Appropriate shoes. Proper conditioning, warm-up, and stretching exercises.
6. Swimming (noncontact sport) *Comment:* Swimming has a low injury rate. Handicapped can be involved (especially some asthmatic children). Better than tennis, basketball, and bicycling for developing stamina, muscle endurance, strength, and flexibility. An overweight child is not necessarily penalized in swimming.	Occasional muscle pulls, mild shoulder and knee injuries.	Proper conditioning, warm-up, and stretching exercises.

Table 4.2.b *Risks and Injuries Associated with Six Major Team Sports*

A Checklist on Understanding School-Age Children

Check-up:

- The school years extend from age six to age twelve. During this time, the growth rate is slow but steady and children add 2-2.5 inches per year in height and three-six pounds per year in weight. Leg growth accounts for most of the height increase. Overall, physical health is excellent; fewer infections and illnesses occur now than for any other age group.

- The face and body assume a more adult look. By age eleven or twelve all of the adult teeth have erupted except for two sets of molars. Muscle strength doubles and bone ossification continues. Brain growth is complete by age ten or twelve.

- Twenty/twenty vision is achieved between ages nine and eleven for most children. Hearing impairment (usually due to untreated middle-ear infection) may affect learning and communication. Breathing becomes more efficient and bowel and bladder control are well established.

- School-age children may begin their adolescent growth spurt between the ages of ten and twelve for girls and twelve and fourteen for boys. Rapid physical growth and sexual development characterize the period referred to as puberty.

- Between the ages of six and twelve, children perfect basic motor skills such as throwing and running and add more complicated activities such as dance, karate, and organized sports. Team sports can benefit children physically and psychologically depending on the attitude and orientation of the involved adults. Physically limited children need not be excluded from team sports play.

- Fine motor skills expand during the school years to include playing a musical instrument, mastering crafts, and perfecting handwriting.

- Good nutrition continues to be important. Since school-age children are more independent, they may eat less well and less often than the preschooler.

- Intelligence, achievement, and aptitude testing occurs frequently during the school years. Achievement tests measure proficiency in a specific subject area. Aptitude tests highlight areas of particular interest. Intelligence tests such as the WISC-R are used to predict school performance and to highlight learning skills and deficits. IQ test performance may be influenced by, among other factors, an individual's particular response style (impulsive or reflective) and ethnic background.

- Creativity and intelligence are separate but not mutually exclusive. Creativity involves coming up with novel solutions to problems, while intelligence involves more conventional thinking. Creativity is fostered by permissive, equality-minded families who are tolerant of creative ideas and confident about their children's abilities.

- Exceptional children are those who score in the extreme ranges on intelligence tests. Gifted or talented children score higher than average, while mentally retarded or learning-handicapped children score below average. Both groups can be encouraged to achieve their highest potential through support and appropriate training.

- Low-income families may enroll their children in special programs designed to help them succeed in school. Project Head Start, initiated in 1964, was the first of these

programs. Since then other attempts have been made to boost the academic potential of disadvantaged children.

- Language skills improve dramatically during the school years as vocabulary expands and children come to appreciate some of the subtleties of word meaning and sentence structure. School-age children enjoy using secret languages and telling jokes and riddles.

- Rules and regulations play an important role in the moral orientation of the school-age child. Rules become more consistently enforced throughout the school years and moral judgments become less absolute and less egocentric. Children also begin to consider the person's intentions, not just the consequences of the action. Both Jean Piaget and Lawrence Kohlberg have offered theories of moral development. Although advanced moral reasoning can be encouraged by reward, modeling, and the use of reasoning, children's moral orientations aren't necessarily reflected in their behavior.

- Cheating is more likely if the potential benefits are high and the risk of being caught is low. It is also more likely among less intelligent students. Encouraging children to think of themselves as honest people and rewarding honest behavior may reduce the incidence of cheating.

- Although it is important for children to acquire knowledge, it is equally important that children consolidate their learning through elaboration, and study topics they like and find interesting.

- School-age children require less sleep than preschoolers. Depending on their age and personal requirements, six to twelve-year-olds need between nine to twelve hours of sleep per night.

- Sex education may involve both parents and teachers during the school years. It is important for children to anticipate the events associated with puberty so they won't be frightened or surprised by the changes that take place.

- Accidents are still the leading cause of preventable injury and death in this age group. Most accidents involve motor vehicles, drowning, and burns. Accident-prone children and those who are self-destructive incur more injury than others.

- The health conditions most likely to affect school-age children are asthma, appendicitis, and convulsive disorders.

- Most cases of sexual abuse involve ten to eleven-year-old girls. More males than females are perpetrators, and most abusing adults are known by their victims. The child's appearance and behavior may give clues that abuse has occurred. Sexual abuse within the family is called incest.

- Video game play is a pastime of many school-age children. Concerns associated with this activity include its expense and its violent themes and sedentary nature. Increased dexterity, improved problem-solving skills, familiarity with technology, and educational potential are positive aspects of video game play.

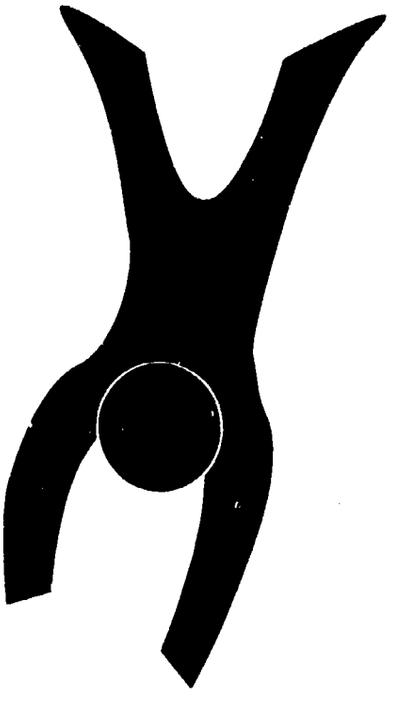
- Beginning at age seven, children enter a stage of cognitive development Piaget calls the concrete operations stage. Compared with preschoolers, children in the stage of concrete operations are more logical and flexible in their thinking. During the school years, children's ability to take another person's point of view improves significantly. These children can also decenter, or take into account several aspects of an object or situation at once. Thus, school-age children can solve the conservation tasks that baffle preschoolers. Their understanding of number relationships and concepts such as time, distance, and speed are substantially better. Concrete operational children can classify objects according to their common attributes and can understand class inclusion and sequence items according to a measurable dimension. Brain and nervous system maturation accounts for many of these cognitive improvements. More efficient memory storage and retrieval strategies also facilitate thinking and problem solving.

- Children acquire a more realistic understanding of death during the school years.

- More than half of all school-age children have mothers who work outside the home. Most school-age children can tolerate such separation provided the mothers themselves are happy in their roles.

- It is important that adopted children be told that they were adopted so parents don't have to maintain deception. Some adoptees may wish to learn more specific information about their backgrounds.

- Sibling relationships during the school years take on a new dimension as the older sibling becomes more capable of giving help and playing different roles. This is especially true if the older sibling is a girl. The most harmonious relationships tend to be between opposite-sex siblings.



- Peers play a major role in socializing the school-age child by transmitting values and rewarding specific behaviors. Children tend to share and cooperate more during the school years because they are less egocentric. Their helping behavior can increase if their parents value and reward helping behavior.

- Children compare their abilities, appearance, and characteristics with those of their peers in order to understand themselves and how they fit in.

- Peer groups are formed on the basis of common interests in the school years. Conformity to peers within the group is higher now than during any other age period. Formal and informal games such as tag, jumprope, board games, and active outdoor sports are the favorite activities of school-age children. Girls are more active and dominant in games than in the past.

- The most popular children are those who are physically attractive, early to mature, and slender; who have backgrounds and interests similar to those of others; who are supportive and responsible; and who communicate easily and comfortably with others.

- Friendships are based on common interests and mutual helping during the school years. Older school-age children realize that friends are special people as well as helpers and often want exclusive relationships with their friends.

- The school is the second most important influence in the life of the school-age child (the first is the family). Children learn best when they sit in the front and near the center of the classroom, when class size is small, and when they like their teachers. Classroom activities may be traditional or open. Children may also receive instruction from peer tutors.

- Comprehension and reading ability are increased when children are given high-interest stories to read. Sex-stereotyped stories encourage sex-stereotyped behavior and nonsex-stereotyped stories encourage nontraditional behavior.

- School success may be affected by sensory impairment, learning disabilities, socioeconomic status, the teacher's expectation of the child's success, parent involvement in school activities, achievement motivation, the amount of anxiety the child experiences, and whether or not the child is the target of prejudice and discrimination.

- Both male and female teachers are more responsive to female students because girls tend to be more docile and cooperative than boys.

- Irrational fears don't trouble school-age children as much as realistic worries about school failure, parent death or divorce, physical injury, and rejection. The threat of nuclear war provokes fear in many children in this age group. School phobia is a particularly extreme reaction to school attendance. The school-phobic child does not want to attend school and may develop physical symptoms that mimic illnesses in order to stay home. Often school-phobic children want to avoid school because they are uncomfortable there and/or do not want to be separated from their parents. Elective mutism is a condition in which the child refuses to speak or speaks only to certain people as a means of controlling the environment.

- While preschool children would use aggression to retrieve a toy or an object, some school-age children may aggress simply to hurt others. The level of aggression the child displays is related to the behavior of his or her parents, the amount of hostility in the home, and the disciplinary style the child is accustomed to. Boys are still more aggressive than girls at this stage.

- Children are better at recognizing emotions in others and empathizing with them.

- Erik Erikson feels that the primary challenge faced by school-age children is to establish themselves as skilled and competent members of society. Freud emphasizes the school years as a time of physiological latency, in which children concentrate on the learning tasks before them.

- According to Elkind, "hurried children" are children who are encouraged to grow up too quickly and to acquire a maturity beyond their years. Hurried children are produced by parents who emphasize early learning and mature dress and by a society that expects children to cope with change and variation as adults do. Elkind feels children should be pushed less and allowed to play more to avoid the hurried-child syndrome.

- Invulnerable children are those who can cope with stress because of their objectivity, independence, and motivation to succeed.

- Children gain more independence from their families. The developmental tasks faced by the family of the school-age child involve adapting to the child's expanding world, recognizing the child's readiness for greater responsibility and independence, helping the child maintain values, and encouraging a positive self-concept.

- School-age children develop closer ties with their parents, although they tend to view their fathers more positively if they come from middle-class families. Boys are especially likely to benefit from warm, nurturant relationships with their fathers.

- Even though school-age children can understand divorce, they still may display behavioral symptoms such as withdrawal and tenseness as well as psychological reactions (anger, lowered self-esteem, etc.) when their parents divorce. The negative impact of divorce can be minimized if parents maintain a cooperative relationship after the separation.

Reading through the checklist concerning what research has to say about the school-age years of a child's life reminds us how his world expanded. He has come a long way through this growth and development process. For thousands of years, man has recognized the precious time of life from birth to the age of accountability, twelve years old. Through the ages, physical burdens of work have been reduced by technology and prolonged educational opportunities for adolescence. Unfortunately, intelligence and high technology have beset complexities that are emotionally crippling for a twelve-year-old that has had inadequate nurturing, education, opportunities, care and love. Adults in charge of the very young have the awesome responsibility to provide the very best for each child daily.

CHAPTER 5

Fast Check: Child Guidance & Discipline

Perhaps the most important predictor of personal happiness and effective functioning is a positive self-image. Children with high self-esteem feel confident, self-assured and comfortable in their relationships with adults and peers. They expect to be successful in the tasks they undertake and assert themselves even at risk of disapproval. Children with low self-esteem are preoccupied with themselves and devote less time to outside activities. Because such children expect to fail, they do not try very hard and therefore often do not succeed. If children's opinions are sought and their ideas respected, they are more likely to gain confidence and self-respect. Adults who work with children must be equipped with motivating techniques that will ensure the development of self-confidence in a new generation.

Don't Forget the Goal -- A Great Self-Concept

For a child in an environment away from family, the teacher is the most important influence. In addition to implementing and personalizing the curriculum, the teacher or caregiver acts as a substitute parent in many ways. Whether it is after school "YWCA" care or a preschool day-care program, the adult in charge is a teacher to the child. Providing emotional support, transmitting values, encouraging appropriate behavior, and discouraging inappropriate behavior all become important facets in the guidance and discipline the child receives in his formative years while building his self-concept.

Popular, well-liked teachers seem to bring out the best in their students. Many of the qualities that children like in their adult caregivers also encourage them to participate more in daily activities, to assume a greater responsibility and participate more in decision-making, to

behave more independently, to express their feelings more freely, and to be more creative (Beller 1972). And, of course, children are more likely to want to please and cooperate with a liked rather than disliked adult.

Ten Golden Rules for Classroom Management

Much has been discussed, researched and written about classroom management. The following ten points, known as "Ten Golden Rules for Classroom Management," address some highlights teachers of young children need to know.

(1) Describe precisely the behavior you want. Make sure a child knows exactly what you expect of him, and then, reward him for doing it. (Rewards don't have to be material things like candy, toys or money. Your kids want to please you: letting them know they have can be a highly motivating reward.)

(2) Ignore slight misbehaviors. Attention to them may be the reward a child wants. When there is no reward for misbehaviors, they're discontinued.

(3) Don't lose you cool. Control your temper when you deal with misbehaviors; remain calm and speak quietly. However, it's perfectly all right -- advisable, in fact -- to let the children know you're angry.

(4) Avoid arguments with your children. Once you give an instruction or order (and are sure you've been heard and understood), ignore any complaints and don't discuss it further.

(5) If you give children an unpleasant task, let them know that you've planned something pleasant to follow it.

(6) Reward desired behaviors at once. No matter how long a task takes, reward should immediately follow satisfactory completion. If a child's performance is not exactly what you want, reward distant approximations of the desired standard, rather than admonish below-par performance.

(7) Be sure to reward a child's efforts to correct his behavior. Once you've punished him for a broken rule, forget the affair. Don't continue to withhold approval of his acceptable behaviors.

(8) Avoid trying to get a child to confess to a misdeed. Instead, tell the "culprit" you know he broke a rule and describe exactly what he did. Inform him that you don't want him to do it again. Advise him of both the pleasant consequences that follow observing the rule and the unpleasant consequences of breaking it. Then drop the matter.

(9) Keep scoldings confidential. When you reprimand a child, do so calmly and quietly away from the hearing of others and at the time of the offense (not after class).

(10) Teach responsibility. Train your children to be responsible for their behavior by offering them choices.

(Adapted from "Discipline Is Something You Do to Somebody" by Thomas G. Banville, Early Years, February 1975.)

Helpful Hints for Guidance

In teaching teachers of young children about guidance and discipline, I have encouraged them to accentuate the positive and eliminate the negative (when at all possible). These positive actions have far-reaching effects, building harmonious days for adult and child. Children learn from modeling behavior of adults. For this reason, adults should consider their choice of guidance techniques with children.

Some very helpful hints for positive guidance techniques are listed in Table 5.1 on the following page.

Guiding Those Hyperactive Children

Hyperactivity

There is considerable controversy about the definition, causes, and treatment of hyperactivity. Modern critics suggest that hyperactivity is a myth created by a culture that has grown intolerant of deviance (Schrag and Divoky 1975). In the United States, hyperactivity is the most common behavioral disorder seen by child psychiatrists. Ten to 60 per every 1000 U.S. schoolchildren are labeled hyperactive, while in England the incidence of hyperactivity is only 1 per 1000 (Clarke-Stewart and Koch 1983).

Children diagnosed as hyperactive demonstrate unusually high levels of activity along with other symptoms. But there are no diagnostic tests that can reliably assess hyperactivity because no one can agree on the causes of the condition. Brain damage, genetics, radiation exposure, lead poisoning, prenatal exposure to alcohol, family and school stress, and food allergies and additives have all been implicated (Ross and Ross 1982; Stewart et al. 1973). For reasons not fully understood, five to nine times as many boys as girls are diagnosed as hyperactive.

HELPFUL HINTS FOR CHILD GUIDANCE

1. Focus on "***DO's***" instead of "DON'Ts"

   Telling a child what not to do does not prepare him for wh. to do or how to handle a situation in a more appropriate way.

DON'Ts	Translated into DO's
Don't throw the ball	Roll the ball on the floor
Quit hitting	Tell him what you want - talk to him instead of hitting him

2. Build feelings of ***self-confidence***

   Exposure to belittling experiences destroys self-confidence. Building "can do" feelings encourages a child to try new things.

Situation	Belittling	Constructive
Peter spills the garbage he's emptying	"Can't you ever do anything right?"	"That's a hard job - next time carry it this way and then it won't spill."
Johnny cries in frustration	"If you'd just listen to me, that wouldn't happen."	"You need to do this first and then it will work."

3. ***Change the environment*** to ***change the behavior***

   Sometimes misbehavior is caused by a situation which can be solved by changing the environment.

Situation	Change environment
Betty and Bob kick one another at the table	Rearrange the setting by putting Betty at one end of the table and Bob at the other so their feet cannot accidently hit one another.
Sally often spills milk at mealtime	Provide a different type of glass to reduce tipping or put a small amount of milk in the glass.

Table 5.1 *Helpful hints for child guidance*

For some time drugs were the treatment of choice in hyperactivity (Hollander 1983). Ironically, stimulant drugs such as Ritalin (dextroamphetamine) help calm some hyperactive children. But such side-effects as insomnia, loss of appetite, temporary suppression of growth, and potential dependence make drugs a less desirable alternative (Safer 1971; Sroufe and Stewart 1973). Special diets are sometimes suggested to minimize hyperactive behavior and can be helpful in some cases (Feingold 1975; Rimland 1983).

Hyperactivity has been overdiagnosed, and parents and teachers have far more influence in its treatment than they should. In a drug-oriented culture, far too many children are placed on drugs before other treatment options have been tried. Since we're also seeing long-term detrimental effects of drug use in the treatment of hyperactivity (not to mention modeling for future drug use by the child), it seems clear that drugs should be used more judiciously than they have been in the past for these particular cases.

A priority in the treatment of hyperactivity is providing help to parents in managing their hyperactive children. Mothers of hyperactive boys in particular tend to be critical, punitive, and disapproving of them in infancy; hyperactive girls receive more positive attention and affection (Battle and Lacey 1972). Techniques have been developed for improving mother/son relationships in such cases, helping hyperactive children manage their behavior around peers, and improving self-esteem (Harris 1987).

Studying the hyperactive child for several years as a practicing psychologist and director of guidance counseling made obvious to me certain characteristic behaviors, and helped me form these suggestions on defining and handling needs.

The Hyperactive Child

Typical of a hyperactive child is to be constantly on the move. The hyperactive child has difficulty acquiring cognitive skills due to poor ability to attend and concentrate.

Other characteristic behavior may reveal that this child:

- wriggles or fidgets in seat when told to sit still;
- rushes into activities without waiting for directions and/or without purpose;
- listens or watches (attends) for only brief periods of time;
- screens out background noises with difficulty;
- speaks with a sense of urgency and hurry; and
- exhibits uneven gross and fine motor skills development and poor control.

How to handle this child:

- Plan interesting, short activities; balance schedule with active/passive activities.
- Encourage child to express himself in words; display calm, unhurried, attentive attitude.
- Provide quiet workplaces free of distractions.
- Use timer to help child complete task.
- Offer praise.
- Provide tasks that insure success; gradually increase difficulty.
- Use physical and verbal cues and reinforcement.

Most hyperactive children need more of what all children need.

- LOVE
- SUPPORT
- REASSURANCE
- CALM, CARING APPROACH
- GUIDANCE TO MEET APPROPRIATE BEHAVIOR EXPECTATIONS
- GOOD FEELINGS ABOUT THEMSELVES

Strategies Improving the Effectiveness of Discipline

The key to positive child guidance is not the use of discipline, but the use of effective discipline. For guidelines to help improve discipline, please refer to Dr. Christine Harris' Table 5.2, *Strategies to Improve the Effectiveness of Discipline*, located on the following page.

Physical punishment has become a taboo in most child care settings. Educators have learned why physical punishment has drawbacks not recognized in past generations. The Swedish government is so strongly opposed to the use of spanking that in 1983 it passed a law prohibiting spanking in the HOME or CLASSROOM. Swedish adults who spank children can be reported to the authorities, who may impose legal sanctions on their behavior. Many people feel that similar legislation should be passed in the United States. Five points on why physical punishment is not effective close this topic for now.

1. Force implies that "Might is right" (that physical force is desirable).
2. Children who are used to physical force don't learn to control their behavior through reason and internal controls.
3. Children imitate aggressive adult behavior -- they learn to deal with problems by striking out.

4. Physical punishment has short-term value only -- no long-lasting behavior changes; children get better at breaking the rules without getting caught.
5. Adults become dependent on the use of physical force and eliminate more reasonable approaches; the possibility of child abuse exists.

Table 5.2 *Strategies to Improve the Effectiveness of Discipline*

Timing

In order for discipline to change behavior, it has to be clearly associated with a particular action. Thus, the longer the delay between the event and the application of reward or punishment, the less effective the discipline will be. A child might hit a sibling, for example, while the parent is on the phone, but be playing peacefully by the time the conversation has ended. Punishing the child now may be confusing. If immediate action is impossible, the parent can increase the effectiveness of delayed discipline by describing the reasons for the action (e.g., "I was so proud of you earlier when you ..."; "Calling names can hurt people's feelings...").

Severity

Caregivers should avoid disciplinary extremes. Lavish praise may seem insincere; severe punishment can injure the child, can indicate that the parent is out of control, and will prove no more effective over time than milder strategies.

Consistency

Consistency is one of the most important features of effective discipline but it is also one of the hardest to achieve. Discipline is consistent if it is applied each and every time the specific behavior occurs. If the parent wants the child to stop pulling the dog's tail, for example, he or she must punish the child for every instance of tail pulling. (In this particular case, the dog may intervene before the parent.) Behavior that is punished erratically persists longer than behavior that is not punished at all, because the message to the child about the parent's expectations is less clear.

Threatened Punishment

Threatened punishment is only effective if the caregiver carries out the threat. If the threatened punishment is never delivered, the child's behavior is actually rewarded, since he or she in effect has escaped an undesirable consequence.

Accompanying Rationale

Discipline is more effective when the caregiver provides a reason for the action rather than punishing with no explanation. Short, concrete explanations are best for young children because of these youngsters' short attention spans and their difficulty in understanding abstract terms. For example, the parent might say, "I'm going to let you stay up because you helped with the dishes" or "You have to go to your room because you threw a rock and rocks can hurt."

Focus of the Discipline

The focus of the discipline should be the child's behavior and not the child per se, especially where punishment is being delivered. Such statements as "you're a bad girl" or "nice boys don't do that" can have a destructive impact. It's more effective and accurate to say to the child, "I don't like your behavior" than to say "I don't like you."

The Caregiver/Child Relationship

Discipline is serious business. Children might ignore insincere praise or half-hearted reprimands. Parents should think through guidance carefully and then apply it consistently to have maximum impact.

Consistency Among All Caregivers

Inconsistencies can occur when caregivers don't share a standard approach. For example, hitting may be ignored by the child's mother, punished by the father, and praised by the sitter, whose rationale may be that the child needs to learn self-defense. All caregivers should agree on what is acceptable behavior and then act accordingly. Besides being more effective than a fragmented approach, a consistent discipline policy will prevent the child from playing one parent against the other. Where parents have not agreed and one parent says "no" or prescribes punishment, children will sometimes seek approval or sanctuary for the other parent. If this strategy pays off, the child can learn to manipulate the parents, causing them to get angry with each other.

REFERENCES

Ames, Louise Bates and Frances L. Ilg. Your Five Year Old. New York: Dell, 1979.

---. Your Four Year Old. New York: Dell, 1976.

---. Your Three Year Old. New York: Dell, 1976.

Bandura, Albert. "Self-Referent Thought: The Development of Self-Efficiency." Social Cognitive Development. Ed. J. Flavell and L. Ross. New York: Cambridge UP, 1981. 239-252.

---. Principles of Behavior Modification. New York: Holt, 1969.

Banville, T.G. "Discipline is Something You Do to Somebody." Early Years. 1975.

Battle, E.S. and B.A. Lacey. "A Context for Hyperactivity in Children." Child Development 43 (1972): 757-773.

Beebe, Brooke M. Best Bets for Babies. New York: Dell, 1987.

Beller, E. Kuno. "Research in Teaching: Organized Programs in Early Education." Handbook for Research on Training. Ed. R. Travers. New York: Rand-McNally, 1972.

Brazleton, T. Berry. Neonatal Behavioral Assessment Scale. Philadelphia: International Ideas, 1974.

Clarke-Stewart, K. Alison and J.B. Koch. Children: Development Through Adolescence. New York: Wiley, 1983.

Dodge, Diane Trister, Derry Gosselin Koralek, and Peter J. Pizzolongo. Caring for Preschool Children. 2 vols. Washington, D.C.: Teaching Strategies, 1989.

Elkind, David. A Sympathetic Understanding of the Child Six to Sixteen. Boston: Allyn and Bacon, 1971.

---. The Hurried Child. Reading, MA: Addison-Wesley, 1981.

REFERENCES (continued)

Erickson, Erik H. Childhood and Society. New York: Norton, 1963.

Feingold, Benjamin F. Why Your Child is Hyperactive. New York: Random House, 1975.

Flake-Hobson, C., et al. Child Development and Relationships. Reading, MA: Addison-Wesley, 1986.

Flavell, John H. Cognitive Development. Englewood Cliffs, NJ: Prentice-Hall, 1977.

Galton, L. "Playing Games is Great for Kids -- If It's Just Play." Los Angeles Times 26 March 1981: Part III, 1, 10-11.

Gesell, Arnold, Louise Bates Ames, and Frances L. Ilg. Infant and Child in the Culture of Today. Rev. ed. New York: Harper and Row, 1974.

Harris, A. Christine. Child Development. St. Paul, MN: West, 1986.

Hollander, S.K. "Patterns of Interest in the Pharmacological Management of Hyperactivity." American Journal of Orthopsychiatry 53.2 (1983): 353-356.

Kohlberg, Lawrence. Stages in the Development of Moral Thought and Action. New York: Holt, Rinehart, and Winston, 1969.

Miller, Neal and John Dollard. Social Learning and Imitation. New York: Yale UP, 1941.

Piaget, Jean. The Moral Judgement of the Child. New York: Collier, 1962.

Rimland, B. "The Feingold Diet: An Assessment of the Reviews by Mattes, by Kavale and Forness and Others." Journal of Learning Disabilities 16.6 (1983): 331-333.

Ross, Dorothea M. and Sheila A. Ross. "Prevention of Fetal Alcohol Effects." Pediatrics 69.6 (1983): 813-816.

Safer, D.J. "Drugs for Problem School Children." Journal of School Health 41 (1971): 491-495.

REFERENCES (continued)

Schrag, Peter and Diane Divoky. The Myth of Hyperactive Child. New York: Pantheon Books, 1975.

Sroufe, L. Alan and M.A. Stewart. "Treating Problem Children with Stimulant Drugs." New England Journal of Medicine 289 (1973): 407-413.

Stewart, M.A. et al. "Hyperactive Children as Adolescents: How They Describe Themselves." Child Psychiatry and Human Development 4 (1973): 3-11.

Sutton-Smith, Brian. Play and Learning. New York: Gardner, 1979.

Whaley, L.F. and D.L. Wong. Essentials of Pediatric Nursing. St. Louis: C.V. Mosby, 1982.

White, Burton L. "An Experimental Approach to the Effects of Experience on Early Human Behavior." Minnesota Symposium on Child Psychology. Ed. J. P. Hill. Minneapolis: U of Minnesota P, 1967.

---. The First Three Years of Life. Englewood Cliffs, NJ: Prentice-Hall, 1975.