

A photograph of a baby sitting and looking directly at the camera. The baby has light skin and short, light brown hair. The background is a plain, light color.

GROWTH AND DEVELOPMENT

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DEFINITION

- GROWTH

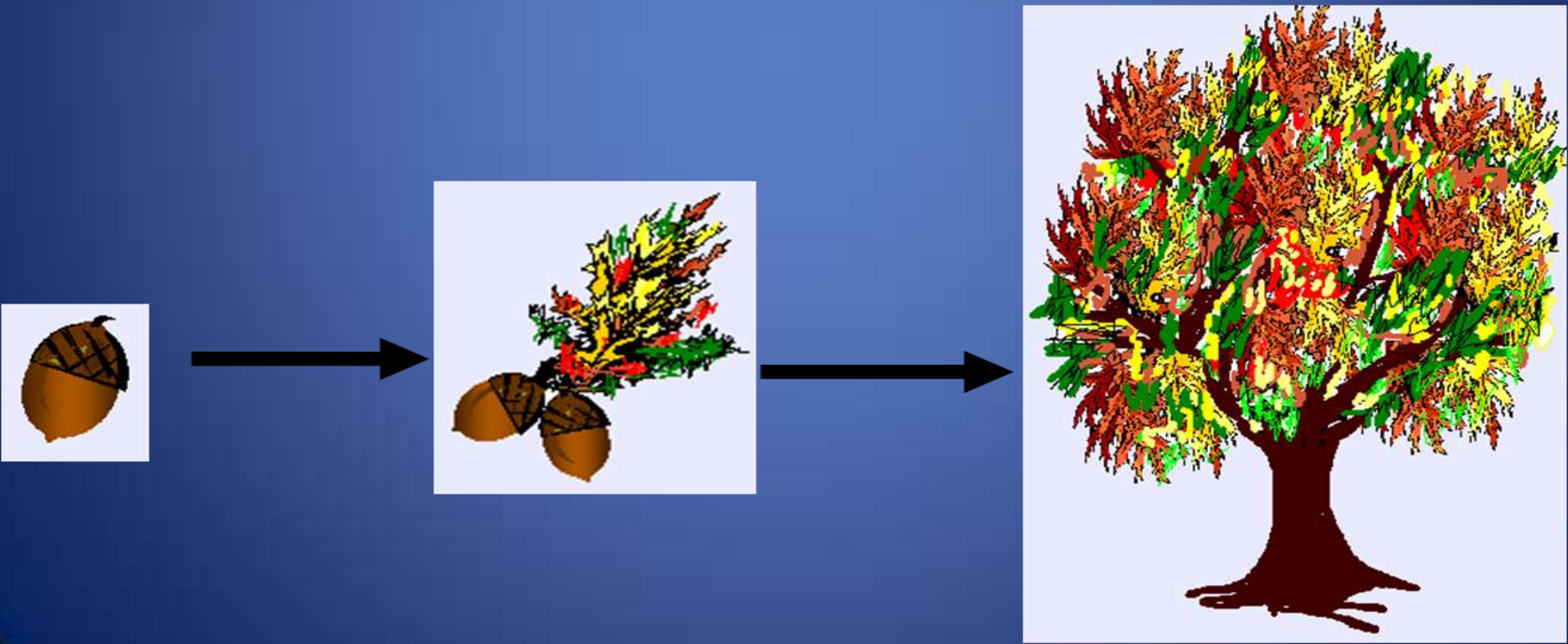
The term growth denotes a net increase in the size, or mass of the tissue. It is largely attributed to multiplication of cells and increase in the intracellular substance.

ACCORDING TO HURLOCK

- GROWTH is change in size, in proportion, disappearance of old features and acquisition of new ones

According to Crow and Crow (1962)

- Growth refers to structural and physiological changes



DEVELOPMENT

- Development specify maturation of functions. It is related to the maturation and myelination of the nervous system and indicates acquisition of a variety of skills for optimal functioning of the individual

According to Hurlock(1959)

- **Development** means a progressive series of changes that occur in an orderly predictable pattern as a result of maturation and experience.

According to J.E. Anderson(1950)

- **Development** is concerned with growth as well as those changes in behavior which results from environmental situations.

According to Liebert, Poulos and
Marmor (1979)

- **Development** refers to a process of change in growth and capability over time, as function of both maturation and interaction with the environment

DIFFERENCE BETWEEN GROWTH AND DEVELOPMENT

GROWTH	DEVELOPMENT
<ul style="list-style-type: none">❖ The term is used in purely physical sense. It generally refers to increase in size, length.❖ Changes in the quantitative aspects come into the domain of Growth.	<ul style="list-style-type: none">❖ Development implies overall change in shape, form or structure resulting in improved working or functioning.❖ Changes in the quality or character rather than the quantitative aspects comes in this domain.

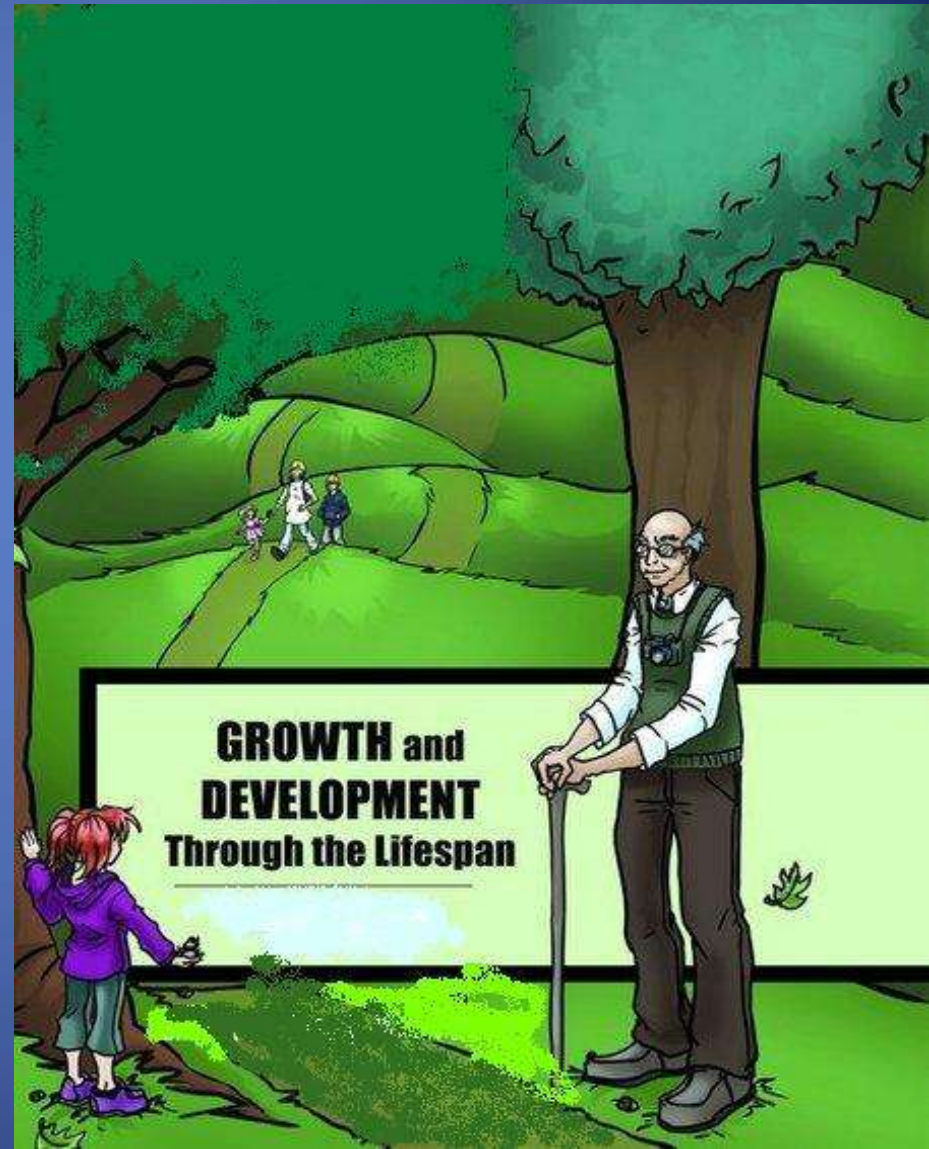
GROWTH	DEVELOPMENT
<ul style="list-style-type: none">❖ It is a part of developmental process. Development in its quantitative aspect is termed as growth.❖ Growth does not continue throughout life. It stops when maturity has been attained.	<ul style="list-style-type: none">❖ It is a comprehensive and wider term and refers to overall changes in the individual.❖ Development is a wider and comprehensive term and refers to overall changes in the individual. It continues throughout life and is progressive.

GROWTH	DEVELOPMENT
<ul style="list-style-type: none">❖ Growth involves body changes.❖ The changes produced by growth are the subject of measurement. They may be quantified.	<ul style="list-style-type: none">❖ Development involves changes of an orderly, coherent type tending towards the goal of maturity.❖ Development implies improvement in functioning and behavior and hence bring qualitative changes which are difficult to be measured directly.

GROWTH	DEVELOPMENT
<p>❖ Growth is cellular . It takes place due to the multiplication of cells.</p> <p>❖ Growth may or may not bring development.</p>	<p>❖ Development is organizational. It is organization of all the parts which growth and differentiation have produced.</p> <p>❖ Development is also possible without growth.</p>

PRINCIPLES OF GROWTH AND DEVELOPMENT

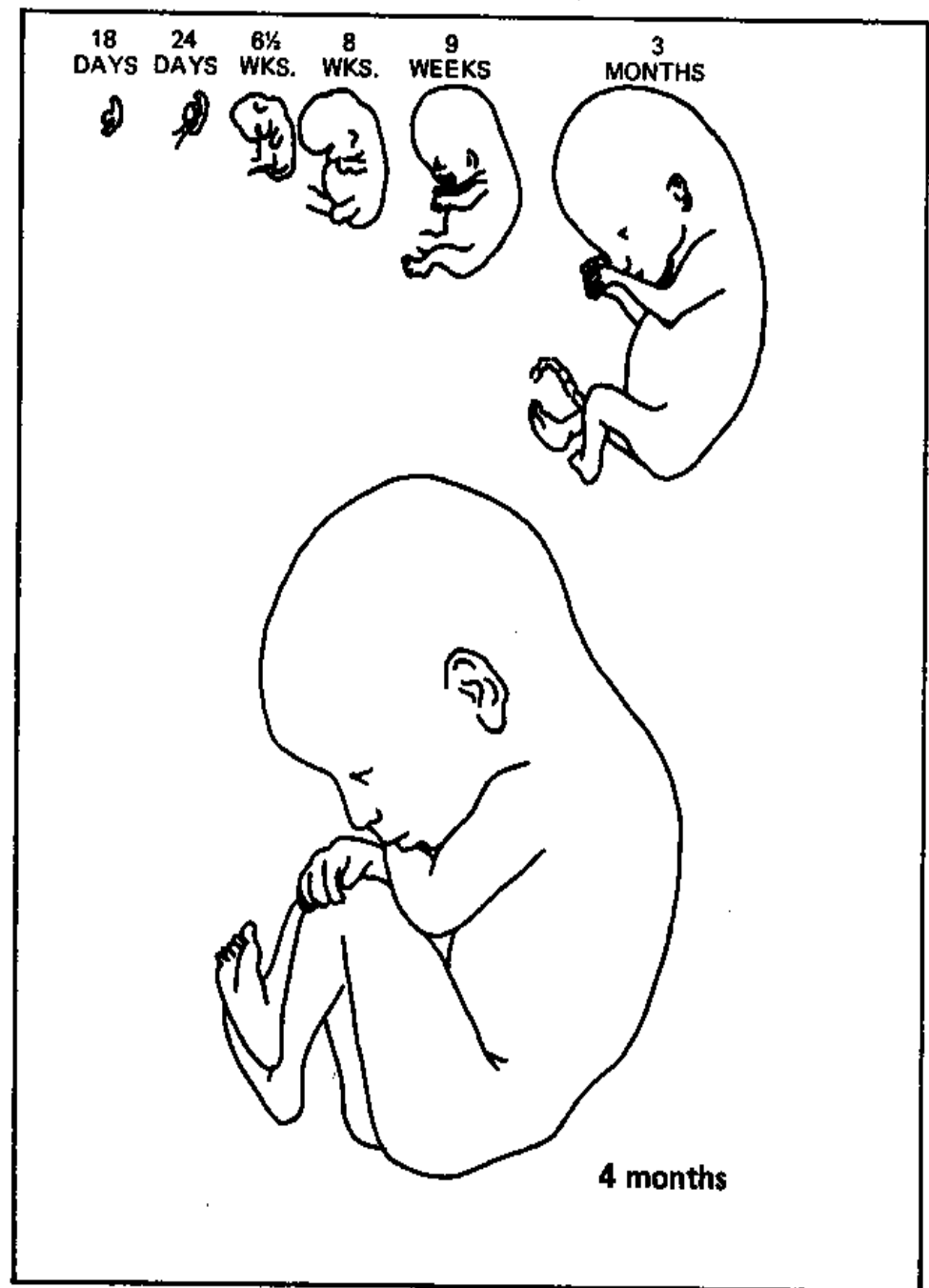
- Development is a continuous process from conception to maturity



- Development depends on the maturation and myelination of nervous system.
- The sequence of the development is the same for all children, but the rate of development varies from child to child

- Certain primitive reflexes anticipate corresponding voluntary movement and have to be lost before the voluntary movement develops

- Development follows a direction and uniform pattern



Stages in prenatal development

- Generalized mass activity given way to specific individual response
- Principle of hierarchical integration
- Development lacks uniformity of rate

- Development proceeds from general to specific responses



- Principle of independence of systems
- Most traits of development are correlated
- Development is cumulative
- Development is a result of interaction of Maturation and Learning
- Development is a product of contribution of Heredity and Environment

FACTORS AFFECTING GROWTH AND DEVELOPMENT

- FETAL GROWTH
 - ❖ Genetic potential
 - ❖ Sex
 - ❖ Fetal hormones
 - ❖ Fetal growth factors
 - ❖ Placental factors
 - ❖ Maternal factors

POST NATAL PERIOD

- Sex
- IUGR
- Genetic factors
- Hormonal influences
- Nutrition
- Infections
- Chemical agents
- Trauma

SOCIAL FACTORS:

- Socioeconomic level
- Poverty
- Natural resources
- Climate
- Emotional factors
- Cultural factors
- Parental education

LAWS OF GROWTH

- Growth and development in children is a continuous and orderly process
- Growth pattern of every individual is unique
- Different patterns in the body grow at different rates

DEVELOPMENTAL AGE PERIODS

- Infancy
 - Neonate
 - Birth to 1 month
 - Infancy
 - 1 month to 1 year
- Early Childhood
 - Toddler
 - 1-3 years
 - Preschool
 - 3-6 years

- Middle Childhood
 - School age
 - 6 to 12 years
- Late Childhood
 - Adolescent
 - 13 years to approximately 18 years

SOMATIC GROWTH

- SKELETAL GROWTH
- BONE AGE ESTIMATION
- ERUPTION OF TEETHS

ERRUPTION OF TEETH



ERRUPTION OF PRIMARY TEETH

	UPPER ARCH	LOWER ARCH
CENTRAL INCISORS	10 MONTHS	8 MONTHS
LATERAL INCISORS	11 MONTHS	13 MONTHS
CANINE	19 MONTHS	20 MONTHS
FIRST MOLAR	16YEARS	16 YEARS
SECOND MOLAR	29 YEARS	27 YEARS

PERMANENT TEETH

Molar	6 to 7 years
Central and lateral incisors	6 to 8 years
Canines and premolars	9 to 12 years
Second molars	12 years
Third molars	18 years or later

CLASSIC STAGE THEORIES

FREUD'S PSYCHO SEXUAL THEORY

INFANCY	ORAL
TODDLERHOOD	ANAL
PRE SCHOOL	PHALLIC
SCHOOL AGE	LATENCY
ADOLESCENCE	GENITAL

PSYCHO SOCIAL THEORY

INFANCY	BASIC TRUST VS MISTRUST
TODDLERHOOD	AUTONOMY VS SHAME AND DOUBT
PRE SCHOOL	INITIATIVE VS GUILT
SCHOOL AGE	INDUSTRY VS INFERIORITY
ADOLESCENCE	IDENTITY VS ROLE DIFFUSION

TRUST VS MISTRUST

- INFANCY
- VIRTUE: HOPE

AUTONOMY VS SHAME AND DOUBT

- TODDLERS
- VIRTUE: WILL
- MAIN QUESTION : CAN I DO THINGS MYSELF OR MUST I ALWAYS RELY ON OTHERS?

INITIATIVE VS GUILT

- PRE SCHOOLERS
- VIRTUE : PURPOSE
- MAIN QUESTION : AM I GOOD OR BAD?

INDUSTRY VS INFERIORITY

- CHILDHOOD
- VIRTUE: COMPETANCE
- QUESTION: AM I SUCCESSFUL OR WORTHLESS?

IDENTITY VS ROLE CONFUSION

- ADOLESCENTS
- QUESTION: WHO AM I AND WHERE AM I GOING?
- EGO QUALITY: FIDELITY

INTIMACY VS ISOLATION

- YOUNG ADULTS
- 20- 34YEARS
- QUESTION: AM I LOVED AND WANTED?
- VIRTUE : LOVE

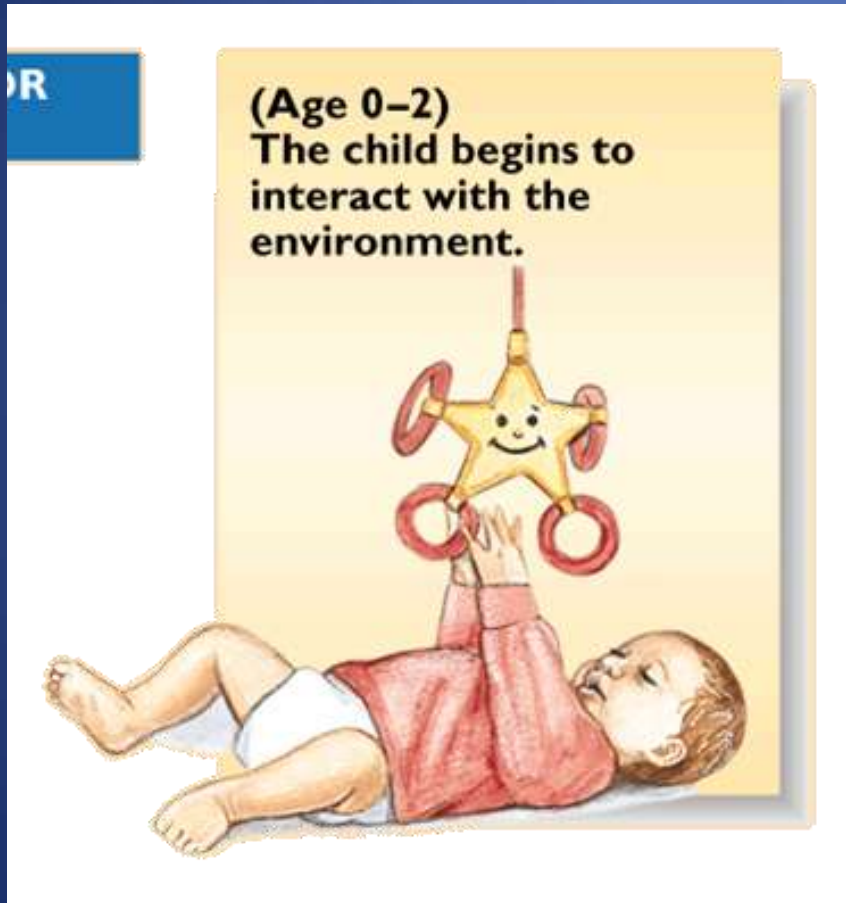
GENERATIVITY VS STAGNATION

- MIDDLE ADULthood
- VIRTUE: CARE
- QUESTION : WILL I PRODUCE SOMETHING OF REAL VALUE?

PIAGET: 4 STAGES OF DEVELOPMENT

- Sensorimotor (0-2 years)
- Preoperations (2-7 years)
- Concrete Operations (7-12 years)
- Formal Operations (12 and up)

SENSORY MOTOR



- Understand the world through senses and motor actions
- Develop object permanence at stage end
- At 9 months, can imitate

SENSORY MOTOR PHASE

- 3 EVENTS
 - SEPARATION
 - OBJECT PERMANENCE
 - SYMBOL OR MENTAL REPRESENTATION

SYMBOL OR MENTAL REPRESENTATION

- HAS 6 STAGES
 - USE OF REFLEX (BIRTH – 1 MONTH)
 - PRIMARY CIRCULAR REACTION (1-4 MONTH)
 - SECONDARY CIRCULAR REACTION (4-8 MONTH)
 - COORDINATION OF SECONDARY SCHEMES
 - TERTIARY CIRCULAR REACTION(13- 18 MONTHS)
 - MENTAL COMBINATION (19-24 MONTHS)

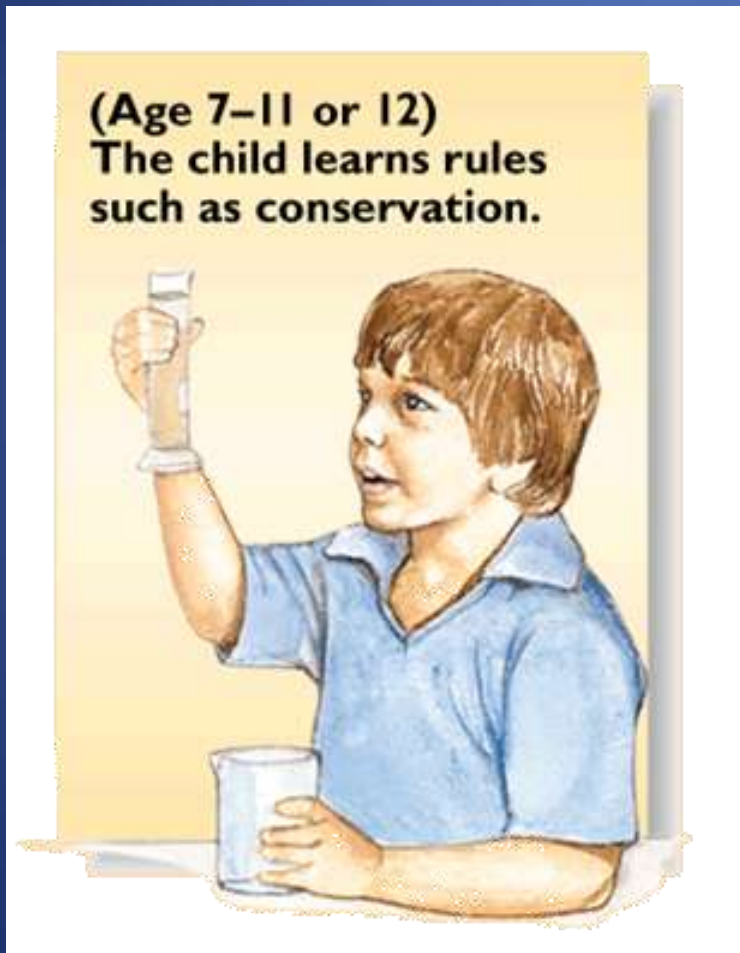
PRE OPERATIVE

- Think about things not present
- Fantasy play
- Thinking egocentric, dominated by perception

(Age 2–6 or 7)
The child begins to represent the world symbolically.



CONCRETE OPERATIONS



- Can manipulate ideas
- Understand reversibility
- Can do conservation and classification

FORMAL OPERATIONS

(Age 12–adulthood)
The adolescent can transcend concrete situations and think about the future.



- Can do abstract & hypothetical reasoning
- Can reason contrary to experience
- MAY be found only in people's areas of expertise!

KOHLBERG' THEORY

- 3 LEVELS OF MORAL DEVELOPMENT
 - PRE CONVENTIONAL MORALITY
 - CONVENTIONAL MORALITY
 - POST CONVENTIONAL MORALITY

PRE CONVENTIONAL MORALITY

- STAGE I
- CHILD IS OBEDIENCE PUNISHMENT ORIENTED
- STAGE II
- CHILD CONFIRM THE SOCIAL EXPECTATION TO GAIN REWARD

CONVENTIONAL MORALITY

- MORALITY OF CONVENTIONAL RULES AND CONFIRMITY
- 2 STAGES
 - GOOD BOY MORALITY
 - AVOID SOCIAL DISAPPROVAL

POST CONVENTIONAL MORALITY

- MORALITY OF SELF ACCEPTED PRINCIPLES
- 2 STAGES
 - MORALITY SHOULD BE MODIFIABLE
 - SOCIAL STANDARDS AND INTERNALISED IDEAS TO AVOID SELF CENSURE

KOHLBERG'S THEORY

TODDLER	PRE CONVENTIONAL
PRE SCHOOL	CONVENTIONAL
SCHOOL AGE	CONVENTIONAL
ADOLESCENCE	POST CONVENTIONAL

BEHAVIOURAL THEORY

THEORY OF INTERPERSONAL DEVELOPMENT

- PROPOSED BY SULLIVAN
- FIRST INTERACTION WITH MOTHERS
- EXTENDS TO OTHER FAMILY MEMBERS BY THE AGE OF 2 YRS
- EXTENDS TO NEIGHBOURS, PEERS AT SCHOOL AND HORIZONTAL WIDENS

NORMAL GROWTH AND DEVELOPMENT DURING INFANCY





newborn



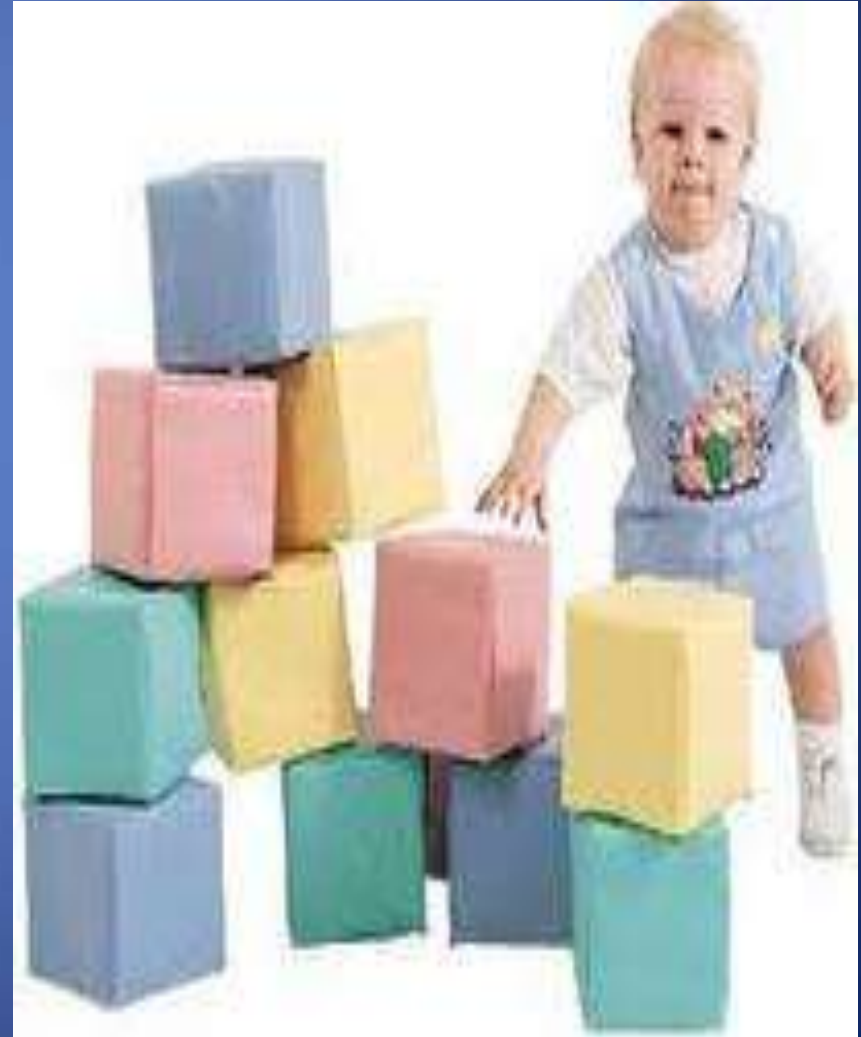
12 months

GROSS MOTOR DEVELOPMENT

- 6 WEEKS – DEVELOP HEAD CONTROL
- 20 WEEKS – COMPLETE NECK CONTROL



- 6 MONTHS – CHILD CAN BEAR ALMOST ALL HIS WEIGHT
- 9 MONTHS- _ begins to stand holding on the furniture
- 10 – 11 months – start cruising around the furniture



- 12- 13 months _ stands independently.
- 13- 15 months _ start walking independently
- 18 months _ runs



FINE MOTOR DEVELOPMENT

- Hand eye coordination
- 12-20 weeks – child observes his own hand (hand regard)
- 4 months – hand of the children come together at midline as he plays



Offer a red cube to the child

- 5-6 months : infant reaches and holds the cube in a crude manner using the ulnar aspect of his hand
- 6-7 months : transfer objects from one hand to other
- 8-9 months : child is able to grasp from the radial side of the hand
- 1 year : mature grasp (index finger and thumb) is evident

By offering pellets, finer hand skills are assessed

- 9-10 months : child approaches the pellet by an index finger and lifts it using – thumb opposition

HAND TO MOUTH COORDINATION

- 6 months : child can take a biscuit to his mouth and chew
- 1 year : tries to feed self from a cup but spills some of the content



DRESSING

- 1 year : child starts to pull off mittens, caps and socks



PERSONAL AND SOCIAL DEVELOPMENT AND GENERAL UNDERSTANDING

- 1 month _ child intently watches his mother when she talks to him



- 6-8 weeks
: social
smile



- 3 months : enjoys looking around and recognizes the mother
- 6 months : vocalizes and smiles at his mirror image and imitates acts such as cough or tongue protrusion



- 6-7 months : stranger anxiety
- 9 months : waves 'bye-bye'. Repeats any performance that evokes an appreciative response from the observers



1 year : he can
understand simple
questions like ' where is
your papa?'

LANGUAGE

- 1 month – alerts to sound
- 3 month – coos (musical vowel sounds)
- 4 months – laugh aloud
- 6 months – monosyllables (ba- pa –da), ah-goo sounds
- 9 months – bisyllables (mama, baba, dada)
- 12 months – 1-2 words words with meaning

VISION

- 1 month – baby can fixate on his mother as she talks to him
- 3-4 months : child can fixate intently on an object shown to him (grasping with eye)
- 6 weeks : binocular vision begins and is well established by 4 months
- 6 months : child adjusts his position to follow object of interest
- 1 year : follow rapidly moving objects

HEARING

- 3-4 months : child turns his head towards the source of sound
- 5-6 months : child turns the head to one side and then downward if a sound is made sound below the level of ears.
- 10 months : child directly looks at the source of diagonally

PSYCHO SOCIAL DEVELOPMENT

TRUST VS MISTRUST

RADIUS OF SIGNIFICANT RELATIONSHIP

- Proposed by Sullivan
- Maternal person (unipolar – bipolar)



COGNITIVE STAGE

- Proposed by Piaget
- Sensory motor

A photograph of a baby crawling on a green blanket. A yellow towel is draped over the baby's head, framing its face. The baby is looking directly at the camera with a slight smile. The background is a plain, light-colored wall.

THANK YOU...