Periods of Development

Prenatal (conception-birth)	Conception occurs and development begins. All of the major structures of the body are forming and the health of the mother is of primary concern. Understanding nutrition, teratogens (or environmental factors that can lead to birth defects), and labor and delivery are primary concerns.
Infancy and Toddlerhood (birth-2yrs)	The first two years of life are ones of dramatic growth and change. A newborn, with a keen sense of hearing but very poor vision is transformed into a walking, talking toddler within a relatively short period of time. Caregivers are also transformed from someone who manages feeding and sleep schedules to a constantly moving guide and safety inspector for a mobile, energetic child.
Early Childhood (2-6 yrs)	This period is also referred to as the preschool years and consists of the years which follow toddlerhood and precede formal schooling. As a two to six-year-old, the child is busy learning language, is gaining a sense of self and greater independence, and is beginning to learn the workings of the physical world.

Periods of Development (cont)

Middle and Late Childhood (6 ys-puberty)	The ages of six to the onset of puberty comprise middle and late childhood, and much of what children experience at this age is connected to their involvement in the early grades of school. Now the world becomes one of learning and testing new academic skills and by assessing one's abilities and accomplishments by making comparisons between self and others.
Adolescence (puberty-18 yrs)	Adolescence is a period of dramatic physical change marked by an overall growth spurt and sexual maturation, known as puberty. It is also a time of cognitive change as the adolescent begins to think of new possibilities and to consider abstract concepts such as love, fear, and freedom. Ironically, adolescents have a sense of invincibility that puts them at greater risk of dying from accidents or contracting sexually transmitted infections that can have lifelong consequences.

Piaget Concepts

Schemas	A schema describes both the mental and physical actions involved in understanding and knowing. Schemas are categories of knowledge that help us to interpret and understand the world. In Piaget's view, a schema includes both a category of knowledge and the process of obtaining that knowledge. As experiences happen, this new information is used to modify, add to, or change previously existing schemas.

Piaget Concepts (cont)

Assimilation	The process of taking in new information into our already existing schemas is known as assimilation. The process is somewhat subjective because we tend to modify experiences and information slightly to fit in with our preexisting beliefs.
Accommodation	Another part of adaptation involves changing or altering our existing schemas in light of new information, a process known as accommodation. Accommodation involves modifying existing schemas, or ideas, as a result of new information or new experiences. New schemas may also be developed during this process.
Equilibration	Piaget believed that all children try to strive a balance between assimilation and accommodation, which is achieved through a mechanism Piaget called equilibration. As children progress through the stages of cognitive development, it is important to maintain a balance between applying previous knowledge (assimilation) and changing behavior to account for new knowledge (accommodation). Equilibration helps explain how children can move from one stage of thought to the next.

Goals of Developmental Research

Basic Research	Basic research is a research approach that is entirely theoretical and aimed at improving or expanding the knowledge-base of a particular field of study. It focuses on "knowledge for its own sake" and it is primarily driven by curiosity and the need to explore the unknown.
Applied Research	Applied research is designed to focus on providing practical solutions to a specific problem. It is a form of investigation that entails solution-oriented inquiries into a phenomenon,a field of study or research subject generally employing empirical methodologies.

Goals of Developmental Research (cont)

Action Research	It seeks transformative change through the simultaneous process of taking action and doing research, which are linked together by critical reflection.

Fundamental Issues

Sources of development	How do nature and nurture interact to produce development?
Plasticity	To what degree, and under what conditions, is development open to change and intervention?
Continuity/Discontinuity	To what extent does development consist of the gradual accumulation of small changes, and to what extent does it involve abrupt transformations, or stages?
Individual differences	To what extent are individual characteristics stable?

Piaget Stages

The Sensorimotor Stage	Birth to 2 Years	The infant knows the world through their movements and sensations Children learn about the world through basic actions such as sucking, grasping, looking, and listening Infants learn that things continue to exist even though they cannot be seen (object permanence) They are separate beings from the people and objects around them They realize that their actions can cause things to happen in the world around them

Piaget Stages (cont)

The Preoperational Stage	2 to 7 Years	Children begin to think symbolically and learn to use words and pictures to represent objects. Children at this stage tend to be egocentric and struggle to see things from the perspective of others. While they are getting better with language and thinking, they still tend to think about things in very concrete terms.
The Concrete Operational Stage	7 to 11 Years	During this stage, children begin to thinking logically about concrete events They begin to understand the concept of conservation; that the amount of liquid in a short, wide cup is equal to that in a tall, skinny glass, for example Their thinking becomes more logical and organized, but still very concrete Children begin using inductive logic, or reasoning from specific information to a general principle

Piaget Stages (cont)

The Formal Operational Stage	12 and Up	At this stage, the adolescent or young adult begins to think abstractly and reason about hypothetical problems Abstract thought emerges Teens begin to think more about moral, philosophical, ethical, social, and political issues that require theoretical and abstract reasoning Begin to use deductive logic, or reasoning from a general principle to specific information

The Sensorimotor Stage of Cognitive Development

Reflexes (0-1 month)	During this substage, the child understands the environment purely through inborn reflexes such as sucking and looking.
Primary Circular Reactions (1-4 months)	This substage involves coordinating sensation and new schemas. For example, a child may suck his or her thumb by accident and then later intentionally repeat the action. These actions are repeated because the infant finds them pleasurable.
Secondary Circular Reactions (4-8 months)	During this substage, the child becomes more focused on the world and begins to intentionally repeat an action in order to trigger a response in the environment. For example, a child will purposefully pick up a toy in order to put it in his or her mouth.

The Sensorimotor Stage of Cognitive Development (cont)	
Coordination of Reactions (8-12 months)	During this substage, the child starts to show clearly intentional actions. The child may also combine schemas in order to achieve a desired effect. Children begin exploring the environment around them and will often imitate the observed behavior of others. The understanding of objects also begins during this time and children begin to recognize certain objects as having specific qualities. For example, a child might realize that a rattle will make a sound when shaken.
Tertiary Circular Reactions (12-18 months)	Children begin a period of trial-and-error experimentation during the fifth substage. For example, a child may try out different sounds or actions as a way of getting attention from a caregiver.
Early Representational Thought (18-24 months)	Children begin to develop symbols to represent events or objects in the world in the final sensorimotor substage. During this time, children begin to move towards understanding the world through mental operations rather than purely through actions.