Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_

Child Development

Chapter 4: Prenatal Development Guided Notes

***Section 4-1: The Developing Baby***

**Conception**

Define:

* \_\_\_\_\_\_\_\_\_\_- an egg cell
* Uterus- a pear shaped muscular organ in which a \_\_\_\_\_\_\_\_\_\_\_ develops

During \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the lining of the uterus thickens. If the ovum is not \_\_\_\_\_\_\_\_\_\_\_\_\_\_, the lining is passed out of the body. This is a woman’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ period.

When a \_\_\_\_\_\_\_\_\_\_\_\_ reaches the fallopian tube, it may penetrate and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_the ovum.

This is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Pregnancy begins at this time.

**The Germinal Stage**

The baby’s development during a pregnancy is called \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The germinal stage is the \_\_\_\_\_\_\_\_ stage in a baby’s development.

It includes the formation of the \_\_\_\_\_\_\_\_\_\_, or fertilized egg.

Stage lasts about two \_\_\_\_\_\_\_\_.

Key steps in this stage are cell division and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**The Embryonic Stage**

The \_\_\_\_\_\_\_\_\_\_is what the developing baby is called from the third week of pregnancy through the \_\_\_\_\_\_\_ week.

Cells begin to develop into all the major \_\_\_\_\_\_\_\_\_\_\_\_\_ of the human body.

The \_\_\_\_\_\_\_\_\_ begins to take control of the body systems.

The amniotic sac forms around the embryo. The \_\_\_\_\_\_\_\_\_\_\_\_ fluid protects the baby from bumps or falls the mom might have.

A tissue called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ develops which is attached to the \_\_\_\_\_\_\_\_\_of the uterus.

The placenta’s job is to absorb oxygen and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the mother’s blood to be transmitted to the baby through the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_, which connects the baby to the placenta.

The umbilical cord takes \_\_\_\_\_\_\_\_\_\_\_\_ products away from the baby and to the \_\_\_\_\_\_\_\_\_\_\_\_\_ which releases the waste into mother’s bloodstream.

**The Fetal Stage**

The fetal stage begins around the ninth week of pregnancy and lasts until \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

During this stage the baby is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Between the \_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_month the kicks and other movements of the fetus touch the wall of the uterus.

By the seventh month, the baby is capable of living \_\_\_\_\_\_\_\_\_\_ of the uterus.

The fetus also gains \_\_\_\_\_\_\_\_\_\_\_ rapidly.

When the fetus grows large during the last few months of pregnancy, it curls up inside the uterus into the \_\_\_\_\_\_\_\_\_\_ position.

**Physical Changes for the Mother**

By the end of the \_\_\_\_\_\_\_\_\_ weeks of pregnancy, the baby’s weight shifts downward, which is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

***Section 4-2: A Closer Look at Conception***

**The Genetic Package**

At conception, every baby receives 46 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; the father’s \_\_\_\_\_\_\_\_\_\_contributes 23 and the mother’s \_\_\_\_\_\_\_\_\_\_ contributes 23.

Define:

* Gene- units that determine a human’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ characteristics

**Multiple Births**

\_\_\_\_\_\_\_\_\_\_\_\_\_ twins occur when one sperm fertilizes one ovum and it splits into two separate cell masses during cell division.

\_\_\_\_\_\_\_\_\_\_\_\_twins form when \_\_\_\_\_\_\_ eggs are fertilized by two \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sperm.

**Infertility**

Options for infertile couples:

* Adoption
* Artificial Insemination
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Ovum transfer
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_mother

***Section 4-3: Problems in Prenatal Development***

**Losing a Baby**

Miscarriage- a developing baby dies prior to the \_\_\_\_\_\_\_\_\_\_ week of pregnancy

\_\_\_\_\_\_\_\_\_\_\_\_\_- a developing baby dies after the 20th week of pregnancy

**Types of Birth Defects**

* + Cerebral palsy
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Cystic Fibrosis
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Muscular Dystrophy
	+ PKU
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Sickle Cell Anemia
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Tay-Sachs Disease

**Causes of Birth Defects**

*Environmental Causes*

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ balance of mom’s diet
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or infections mom has during pregnancy
* Harmful \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mom consumes
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that benefit the mother, but hurt the baby
* Exposure to \_\_\_\_\_\_\_\_\_\_\_

*Hereditary Causes*

* + Recessive inheritance- both parents pass on the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_ recessive gene
	+ Dominant inheritance- defective gene is passed on by only \_\_\_\_\_ parent

*Errors in Chromosomes*

An error might occur when an egg or sperm cell is developing, causing the baby to have too \_\_\_\_\_\_\_, too few, broken or \_\_\_\_\_\_\_\_\_\_\_\_\_\_ chromosomes.

*Interactions of Heredity and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

**Prevention and Diagnosis of Birth Defects**

* Genetic \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Prenatal tests
	+ Alpha-fetoprotein blood test
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- uses sound \_\_\_\_\_\_\_\_\_\_\_ to make a video image
	+ Amniocentesis- process of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a sample of the \_\_\_\_\_\_\_\_\_\_\_\_\_ fluid
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_villi sampling- uses a sample of the \_\_\_\_\_\_\_\_\_\_\_\_ from the membrane that encases the fetus

***Section 4-4: Avoiding Dangers to the Baby***

**Alcohol and Pregnancy**

\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ Syndrome- incurable condition of children whose moms consumed alcohol while pregnant

**Other Drugs**

* + Other substances known to cause birth defects linked to environmental factors are:
	+ Medicines
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Nicotine
	+ Illegal drugs such as \_\_\_\_\_\_\_\_\_\_\_\_, LSD, ecstasy, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and cocaine
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**XRays**

Patients should always wear \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ during an x ray to reduce the amount of \_\_\_\_\_\_\_\_\_\_\_\_ they are exposed to.

**Hazardous Substances and Chemicals**

* Paint
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ used to exterminate bugs
* Lead in \_\_\_\_\_\_\_\_\_\_ and in paint
* Carbon monoxide
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Solvents, paint \_\_\_\_\_\_\_\_\_\_\_\_\_\_, and formaldehyde

**Infections**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Toxoplasmosis
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Sexually transmitted diseases
* AIDS