

Vocabulary Chapter 7 Continuity Through Development

differentiation

The process in which similar cells divide and grow into specialized function cells

Example: the neural tube growing into brain cells in human development

morphology

The shape or structure of a cell or group of cells

Example: muscle cells are long and narrow

embryo

The first stages of development of an organism

Example: human embryo at two weeks

cleavage

The process in which cells divide quickly during the first stages of growth, producing tiny divisions in the developing organism

blastula

The "hollow ball" stage of embryo development consisting of several hundred cells

gastrula

The stage of development following the blastula stage in which the developing cells begin to form cell layers

ectoderm

The original surface layer of the developing gastrula

endoderm

The group of cells that develop and flow to the center of the gastrula

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mesoderm

The layer of cells between the endoderm and ectoderm in the developing gastrula

clone

An exact copy of the parent organism

Examples: cloned sheep, monkeys, and other animals

placenta

The structure (organ) that provides a mechanism for nourishing the growing fetus in the mother's uterus

Example: It is sometimes referred to as the "afterbirth" as it is delivered after the new baby organism is delivered.

umbilical cord

In unborn mammals, the tube which connects the developing organism with the placenta

amniocentesis

The process of removing a small amount of amniotic fluid (through a needle) from the mother's womb in order to test for abnormalities in the growth of the developing fetus

fetus

A vertebrate embryo in the later stages of development in which certain structures such as arms and legs are identifiable

Examples: human fetus, dog fetus

trimester

One of three equal periods of time, each approximately three months, used to describe the stage of a pregnancy in humans

Examples: first trimester, second trimester, third trimester

fetal alcohol syndrome

A condition in which a child experiences abnormal development in the mother's womb due to the effects of alcohol consumed by the mother while the fetus is developing

Examples: a baby born with a short nose, a long, narrow upper lip, and narrow eye openings

tumor

A mass of abnormally growing tissue caused by uncontrolled cell growth and division

Examples: brain tumor, pancreatic tumor

oncogene

A gene found in viruses that can trigger cancerous growth

metastasis

The process in which cancer spreads from its original location in the body

Examples: cancer of the lungs metastasizing into the general body cavity

cancer

An abnormal, often rapid, irregular, uncontrolled growth of cells in living tissues

Examples: lung cancer, stomach cancer, leukemia