EARLY EMBRYONIC DEVELOPMENT IN HUMANS

Fertilization

ZYGOTE (2N)

Cleavage: mitosis; no increase in size

MORULA (Solid ball of cells)

BLASTOCYST (Hollow ball of cells)

Growth: increase in size of daughter cells
Morphogenesis: shaping of embryo with migration of cells
Differentiation: cells acquire specific structure and function

GASTRULA ("Tube within a tube"); 3 germ layers

Ectoderm
- Nervous system
- Portions of eye & ear
- Tooth enamel
- Skin & hair

Mesoderm
- Connective tissues
- Muscle
- Blood
- Heart & blood vessels
- Bone
- Kidneys

Endoderm
- Lining ofDigestive tract & Resp. Syst.
- Thyroid gland
- Liver
- Pancreas

(=Specialization)