

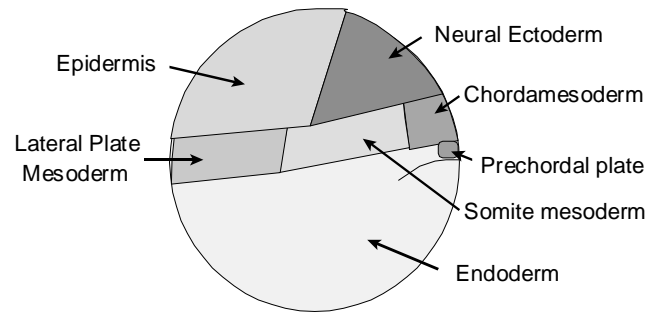
Amphibia

Gastrulation

Neurulation

Later Development

1



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Gastrulation (1)

- ! **Invagination begins**
 - ▶ at site of grey crescent
 - ▶ flask cells form
 - migrating inward, tight connections at outer ends
- ! **Dorsal lip of blastopore**
 - ▶ prechordal plate first
 - ▶ chordamesoderm enters
 - Archenteron roof – then becomes NOTOCHORD
- ! **Surface Endoderm**
 - ▶ becomes floor and wall of early archenteron
 - ▶ later walls fuse dorsally separating from notochord

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Gastrulation (2)

- ! **Ectoderm**
 - ▶ spreads laterally and ventrally toward blastopore as mesoderm and endoderm go inside
 - ▶ **Epidermis vs Neural Ectoderm**
- ! **Somite Mesoderm**
 - ▶ moves in laterally, separates from archenteron
 - ▶ forms segmental somites
- ! **Lateral Plate Mesoderm**
 - ▶ moves in laterally, separates from archenteron
 - ▶ forms coelom walls, heart, circulation, etc.

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Neurulation

- ! **Notochord INDUCES** overlying ectoderm
 - ▶ Neural plate – COLUMNAR epithelium
 - ▶ anterior to posterior differentiation
- ! **Neural folding**
 - ▶ columnar cells change shape, Neural Groove forms
 - ▶ Neural Folds move upward and toward midline
 - ▶ Neural Folds fuse at midline – epidermis meets too
 - ▶ Neural Tube now complete, inside below epidermis
- ! **Neural Crest**
 - ▶ dorsolateral edge either side of neural tube
 - ▶ runs anterior to posterior – functionally segmental

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Later Development of Germ Layers

- ! **Epidermis**
- ! **Neural Ectoderm**
- ! **Neural Crest**
- ! **Notochord**
- ! **Somites**
- ! **Lateral Plate**
- ! **Mesenchyme**
- ! **Endoderm**

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