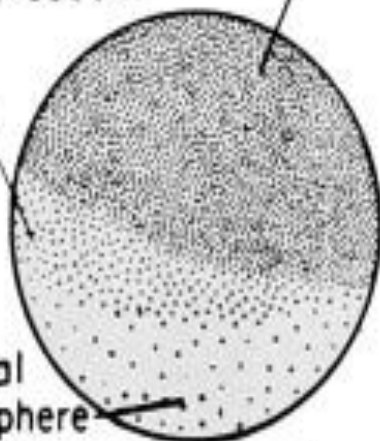




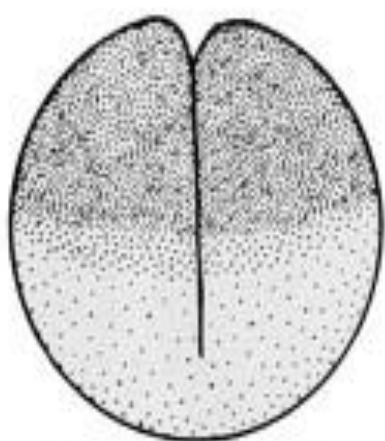
Animal hemisphere

Gray crescent

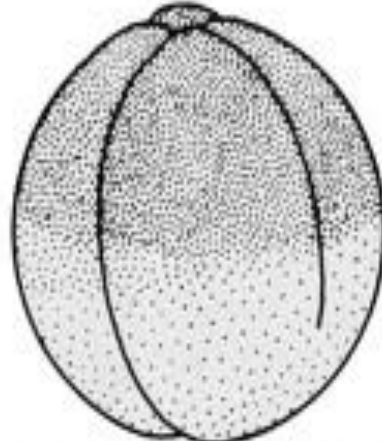
Vegetal hemisphere



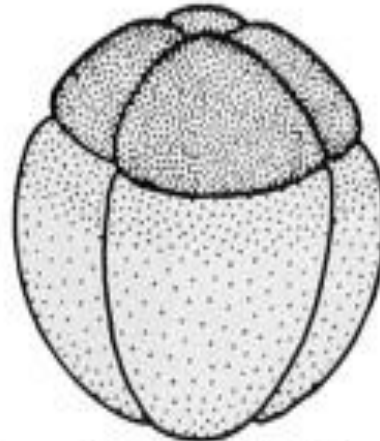
Stage 2. 1 hr. post-fertilization. Right side view.



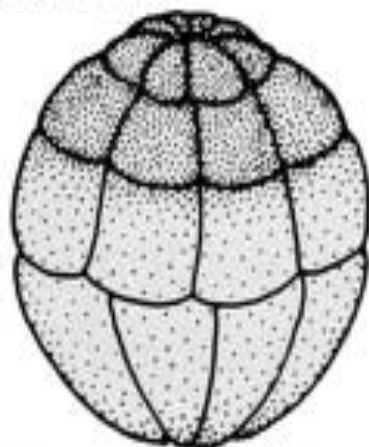
Stage 3. First cleavage at 3.5 hrs. Posterior view.



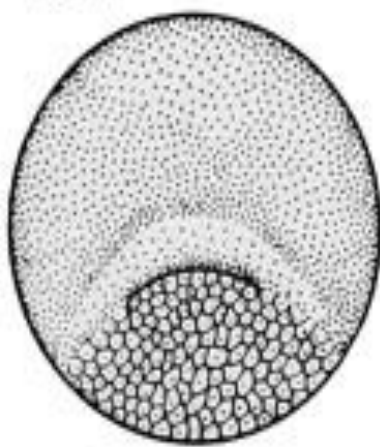
Stage 4. Second cleavage at 4.5 hrs. Right side view.



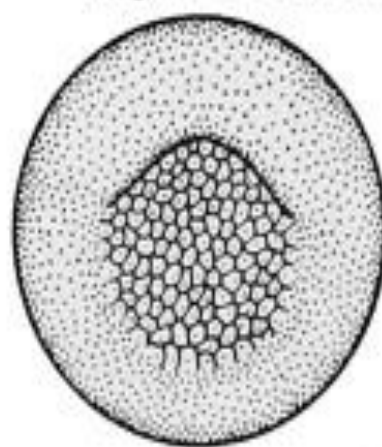
Stage 5. Third cleavage at 5.4 hrs. 8 cells.



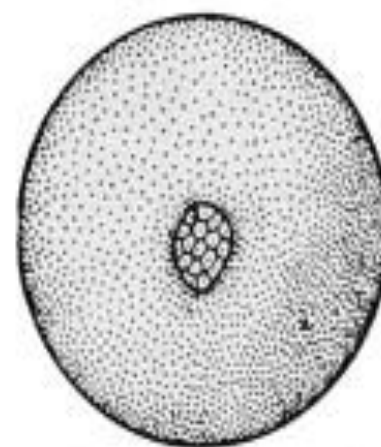
Stage 7. Fifth cleavage. 32 cells at 7 hrs.



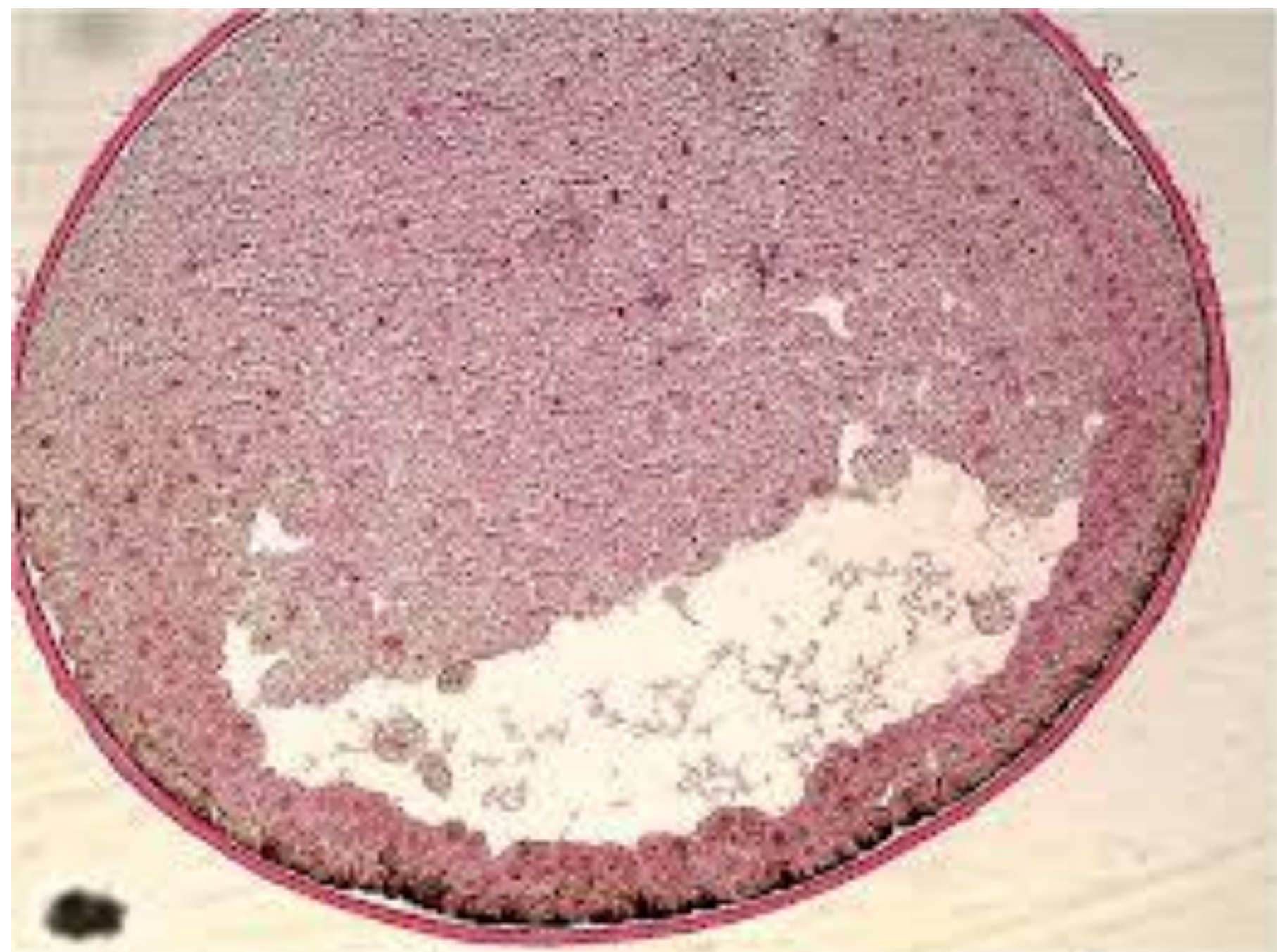
Stage 10. Earliest involution of dorsal lip at 26 hrs. Posterior view.

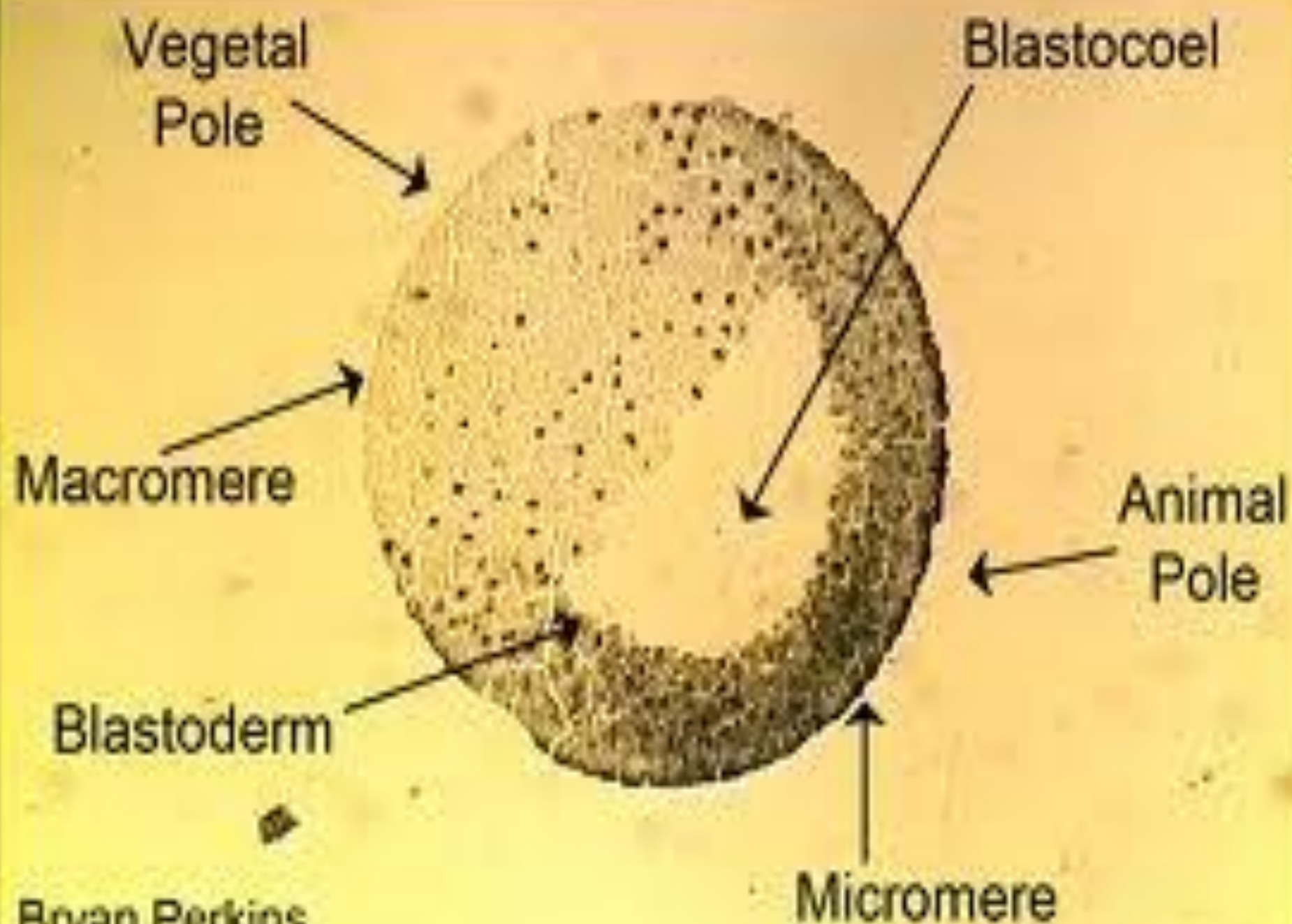


Stage 11. Extension of dorsal to lateral lips at 34 hrs. Posterior view.



Stage 12. Complete lip involution, encircling yolk at 42 hrs.





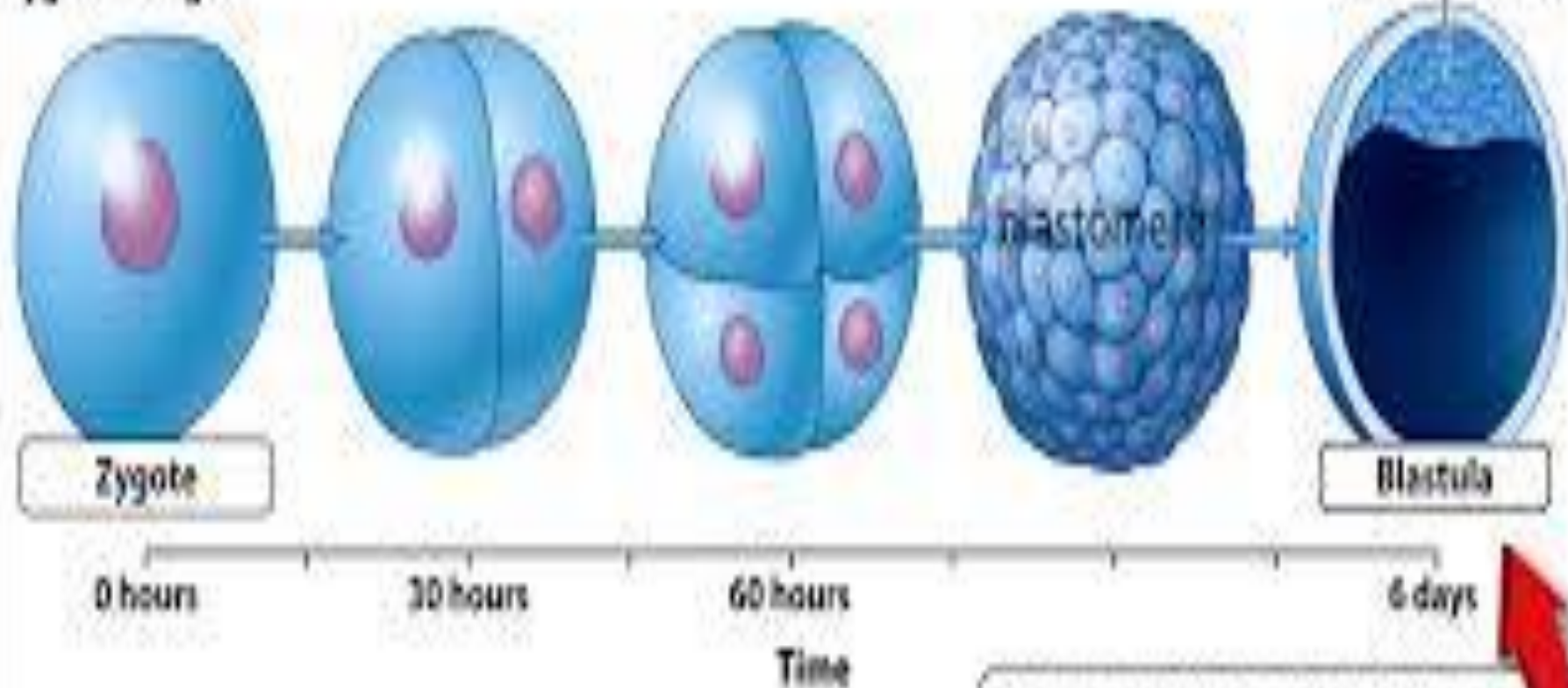
Bryan Perkins

what stage

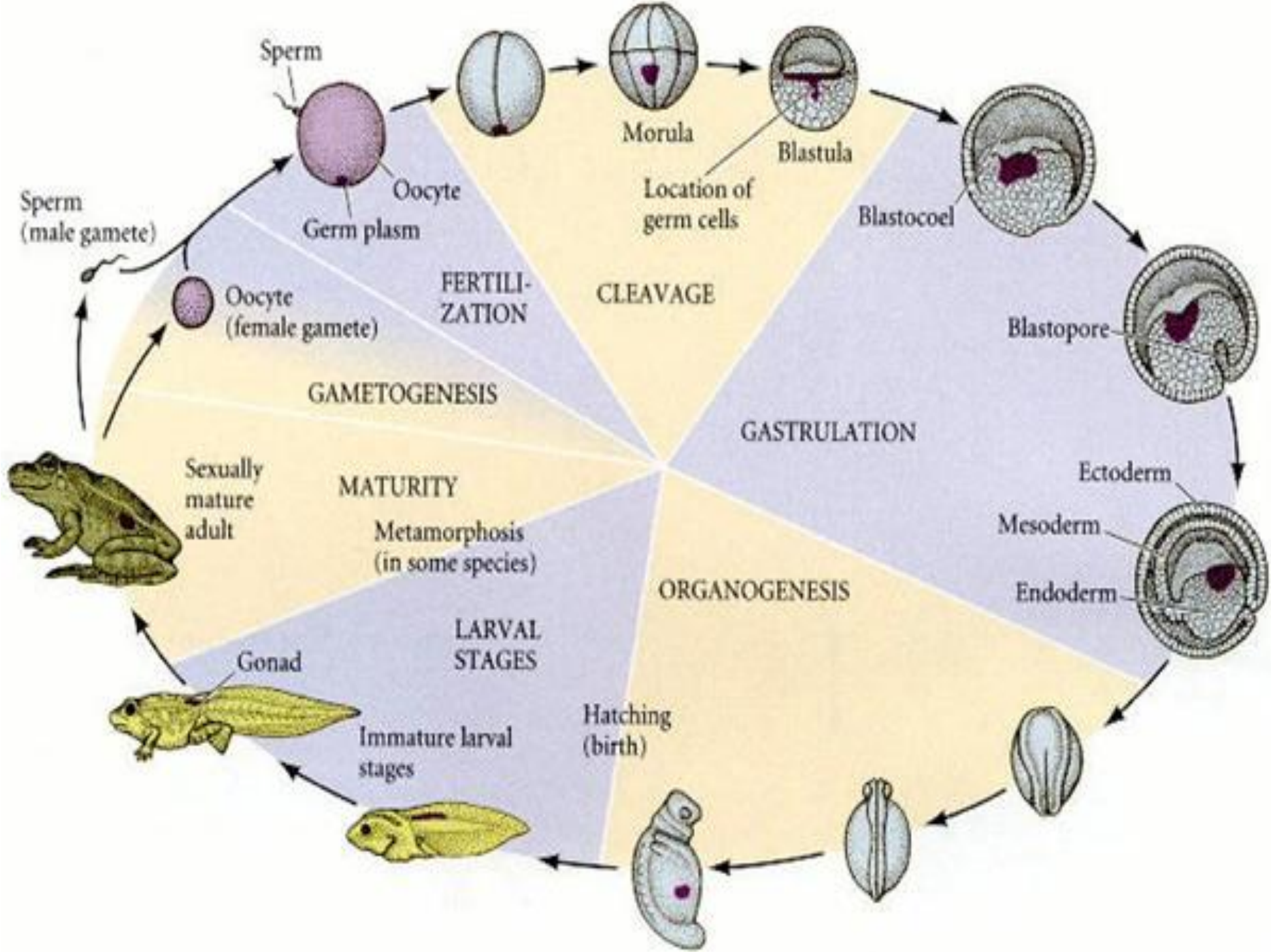


CLEAVAGE

Shortly after fertilization, cleavage—the early cell division, by mitosis, of the zygote—begins.



Cleavage results in a blastula (the mammalian version is called a blastocyst), a hollow ball of cells that contains an inner cellular mass, which will form the embryo.



Unfertilized egg

Fertilized egg

Midblastula
(4,000 cells, 7 hours)

Early gastrula
(20,000 cells, 9 hours)

Late gastrula
(12 hours)

Animal hemisphere

Pigmented cortical cytoplasm

Sperm entry

Unpigmented vegetal hemisphere

Blastocoel cavity

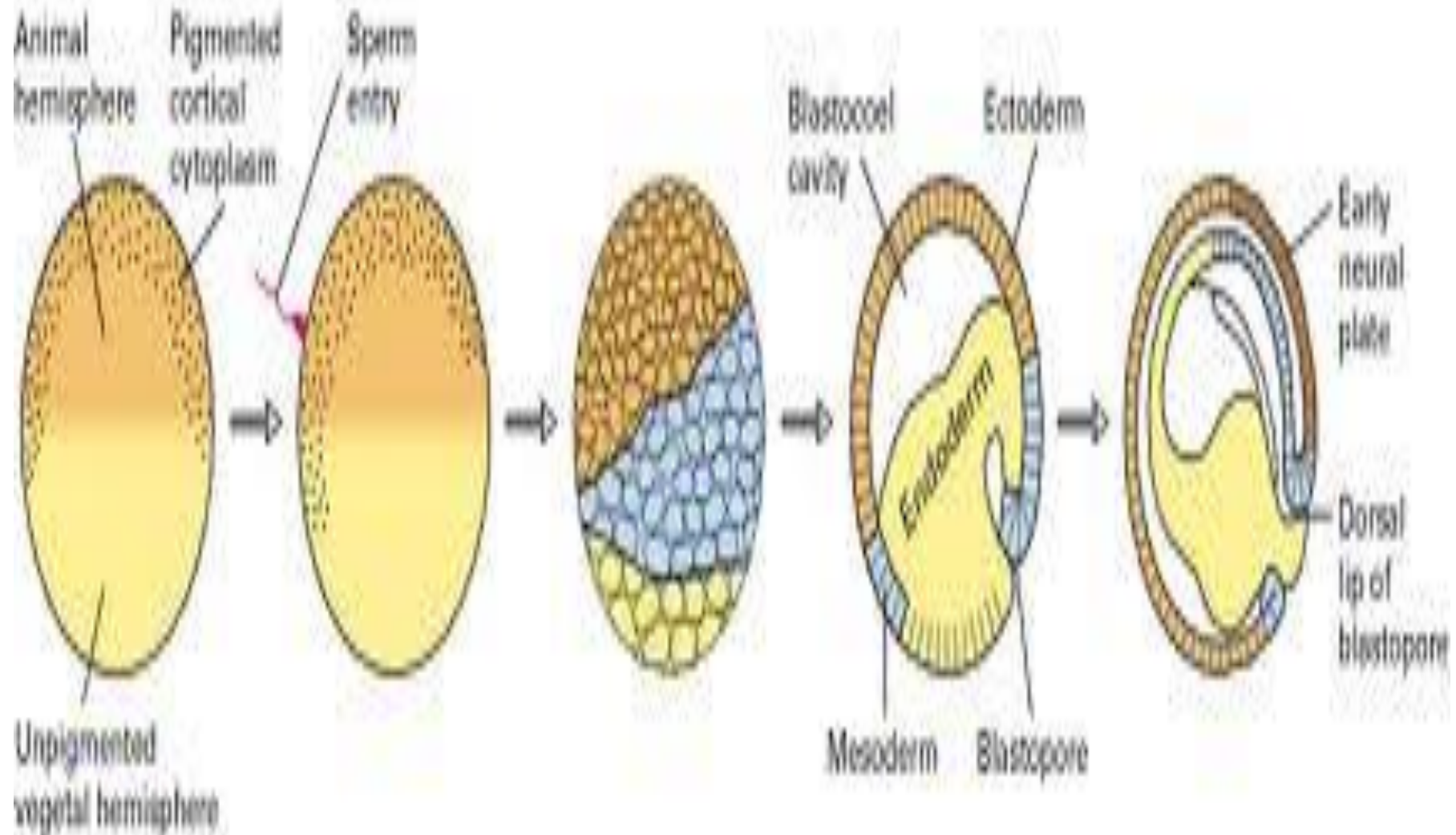
Ectoderm

Mesoderm

Blastopore

Early neural plate

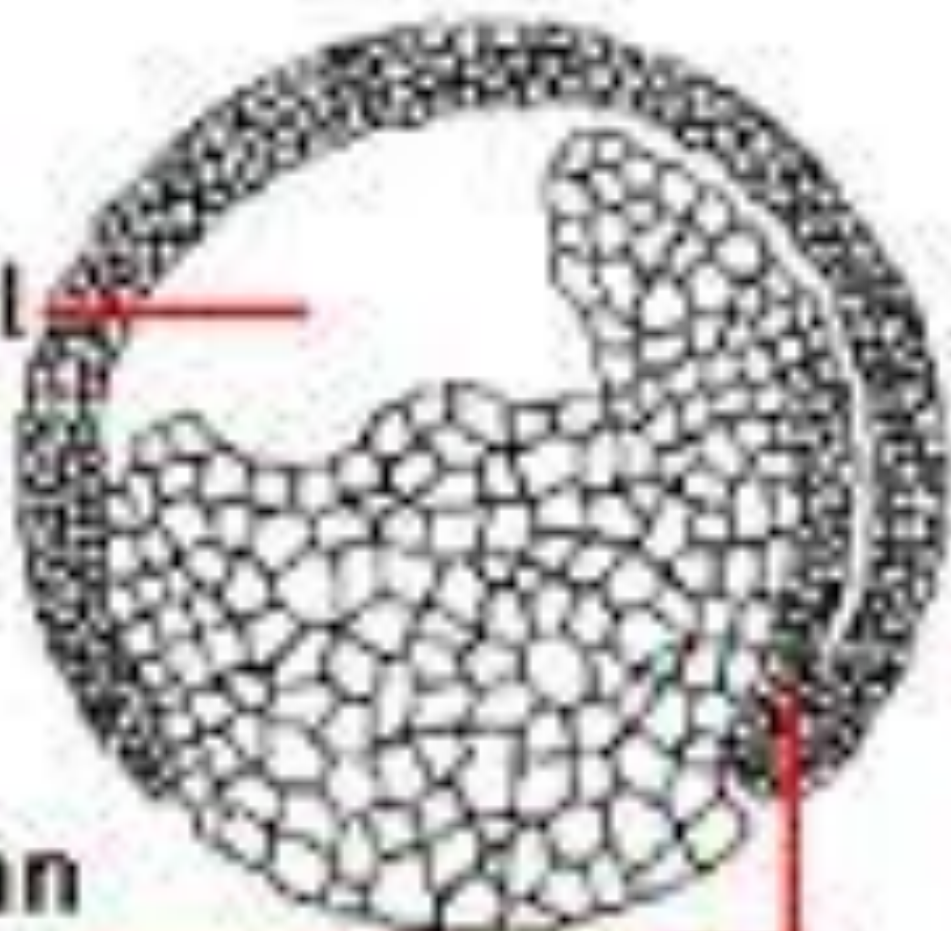
Dorsal lip of blastopore

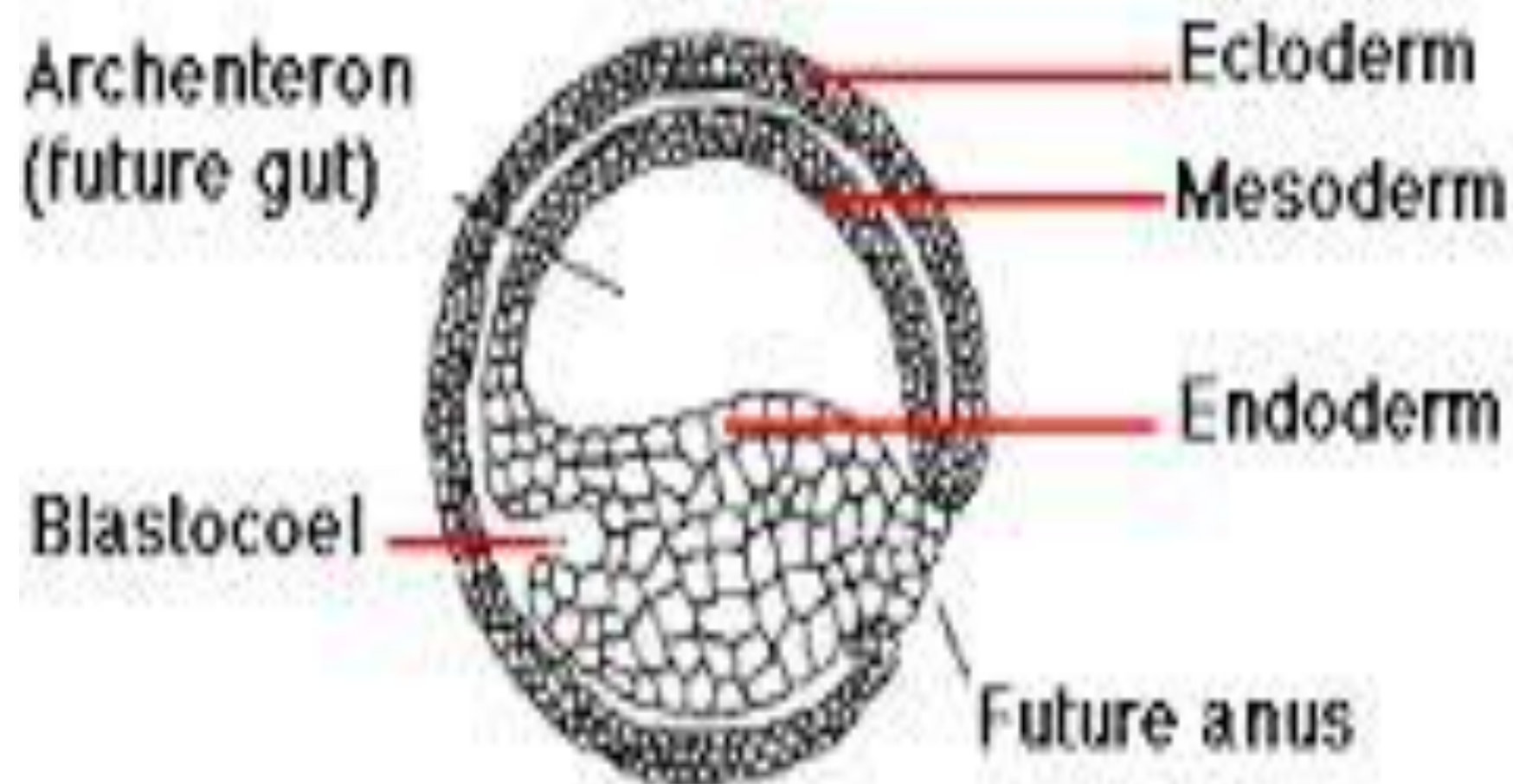


Blastocoel

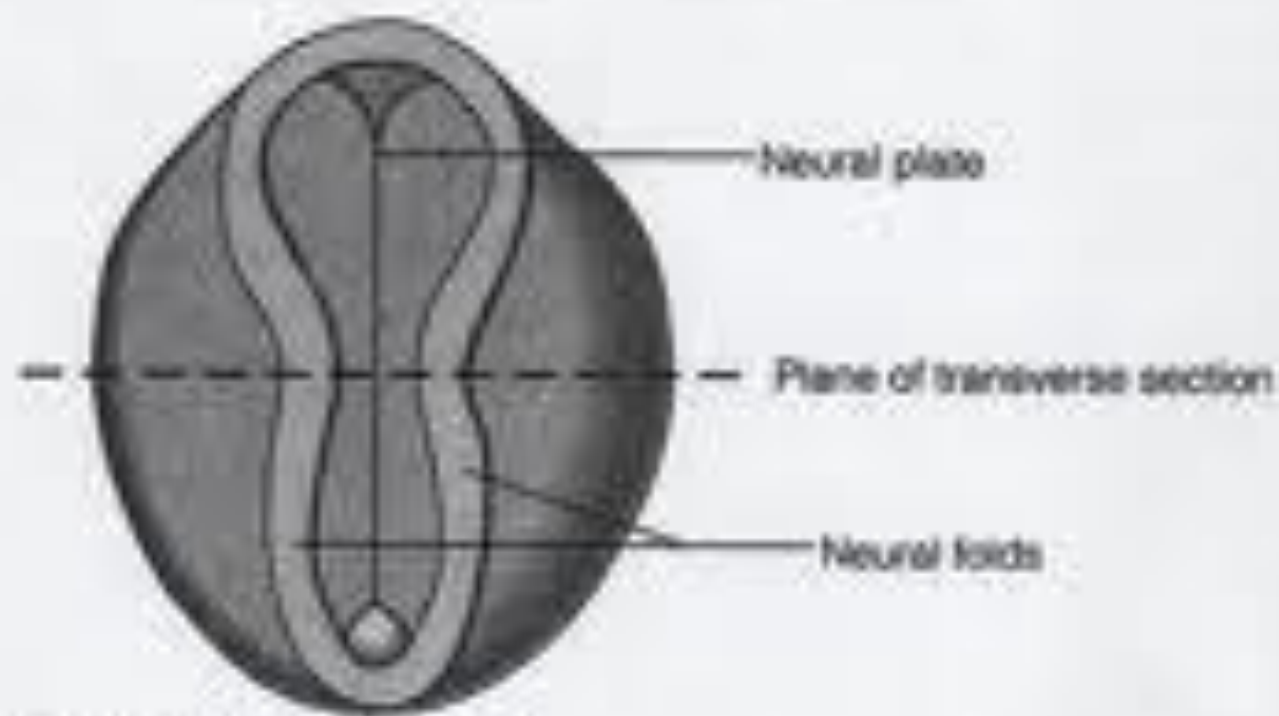
Spemann
organizer

Early
gastrula



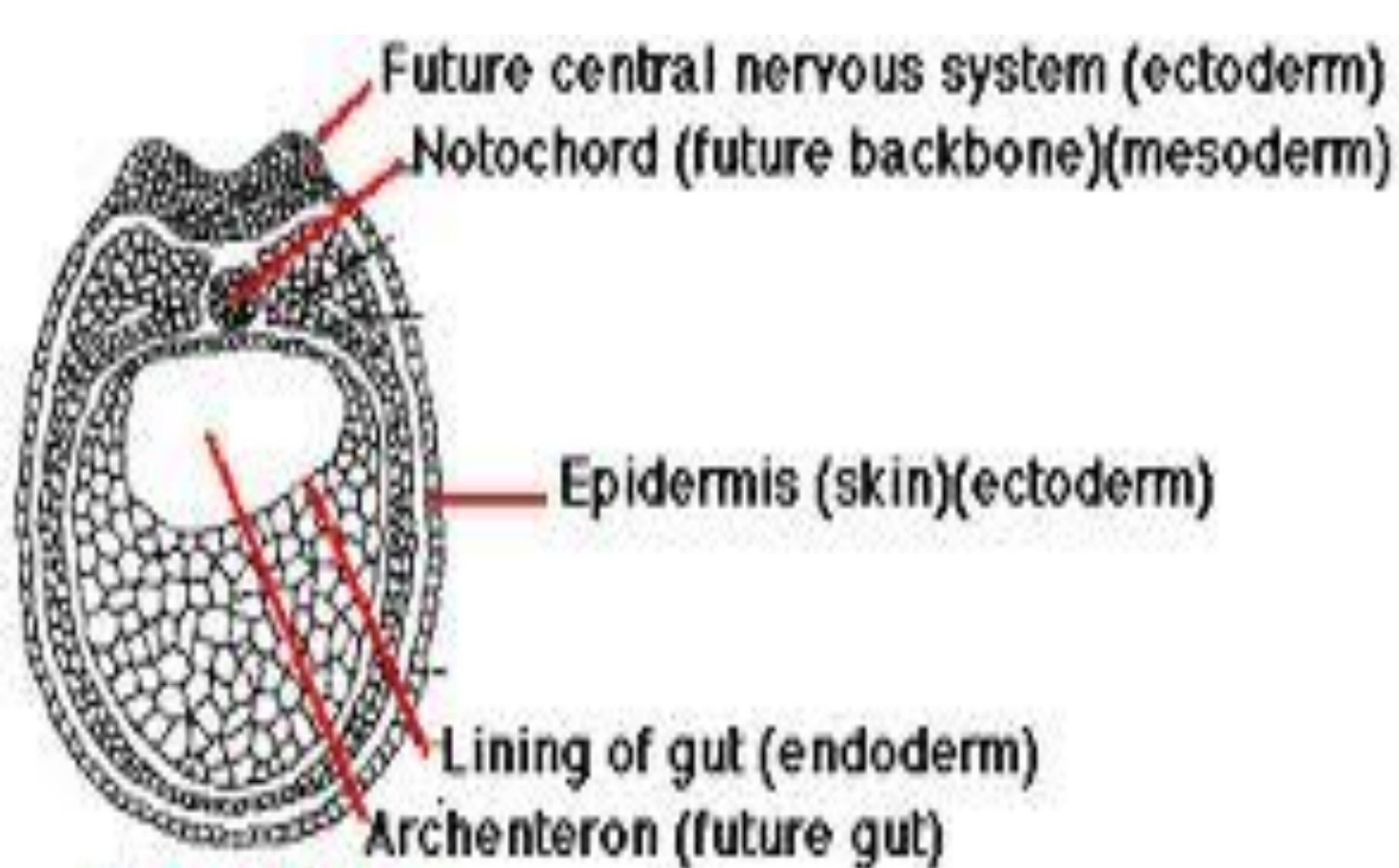


Late
gastrula

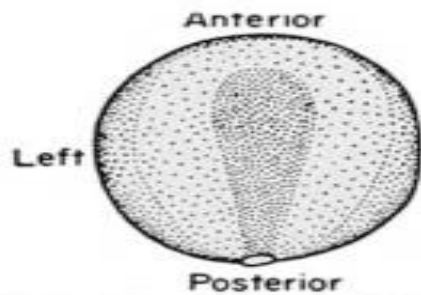


a. Dorsal view of frog embryo

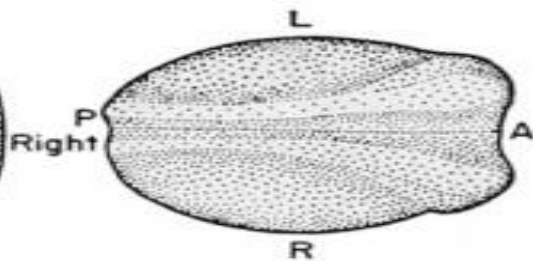




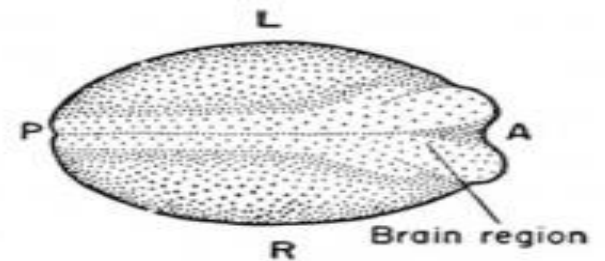
Neural folds
stage



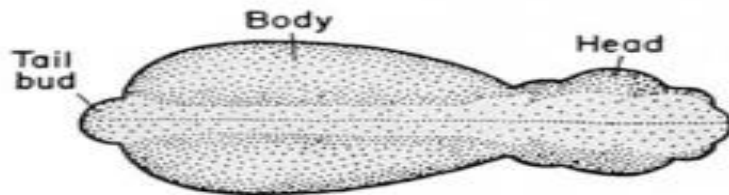
No.13. Early neurula. Dorsal view. Medullary plate stage.



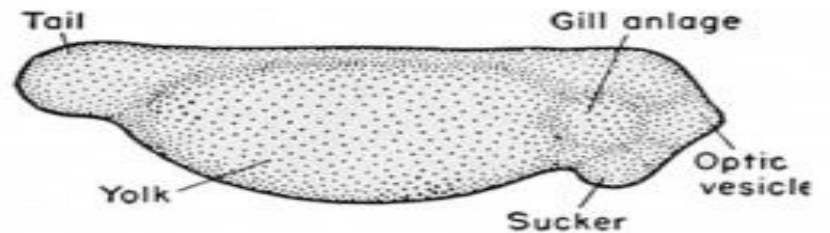
No.14. Neural fold stage. Dorsal view.



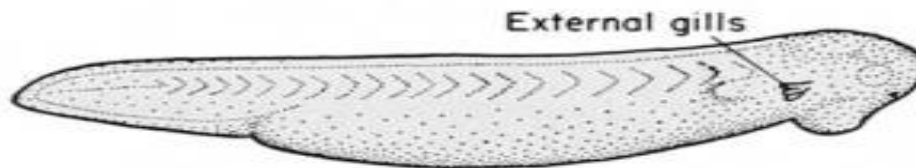
No.15. Closing neural fold. Dorsal view.



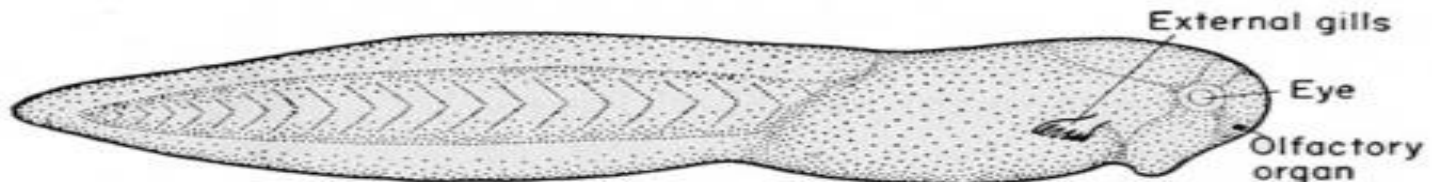
No.16. Early tail bud. Dorsal view.



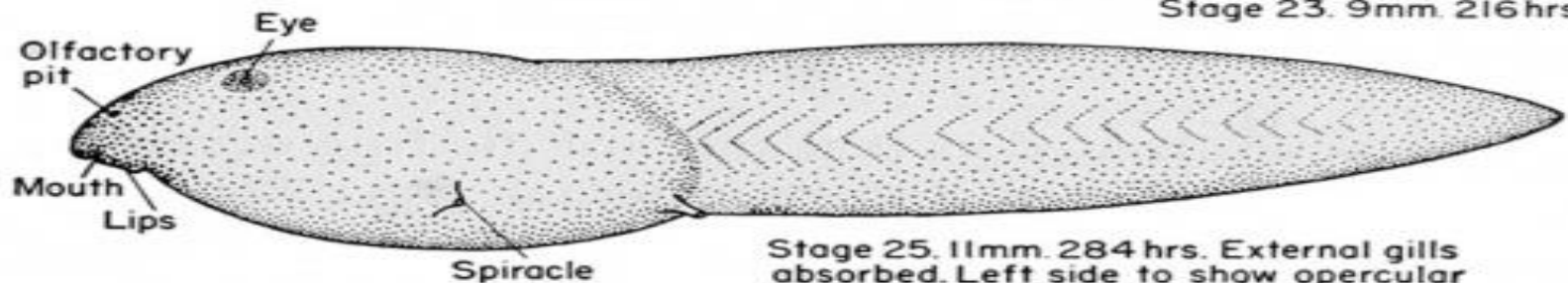
No.17. Earliest muscular response. Lateral view.



Stage 20. 6mm 140hrs. Gill circulation and hatching.



Stage 23. 9mm. 216 hrs.



Stage 25. 11mm. 284 hrs. External gills absorbed. Left side to show opercular fold and spiracle.

