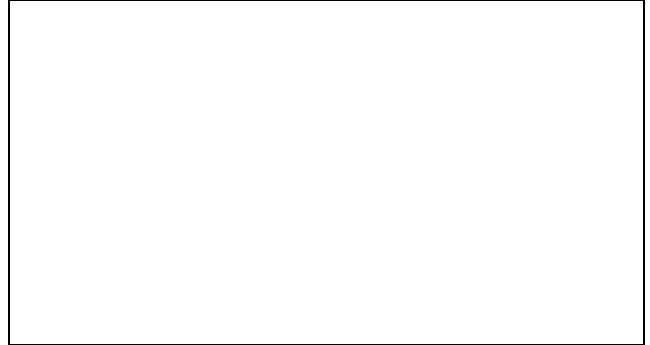
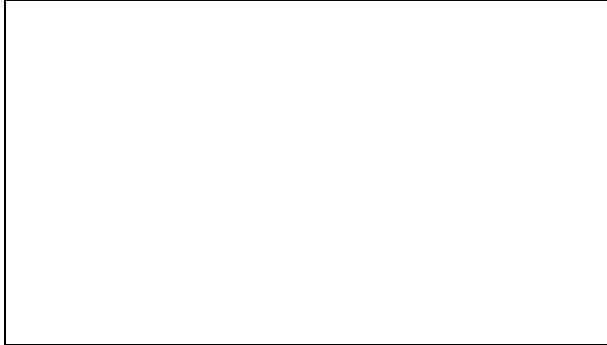
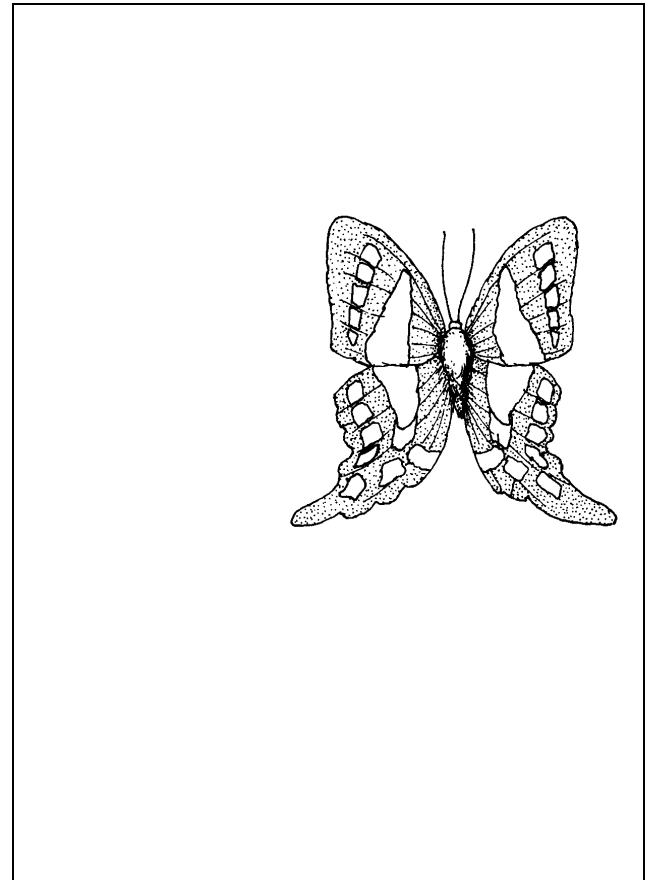
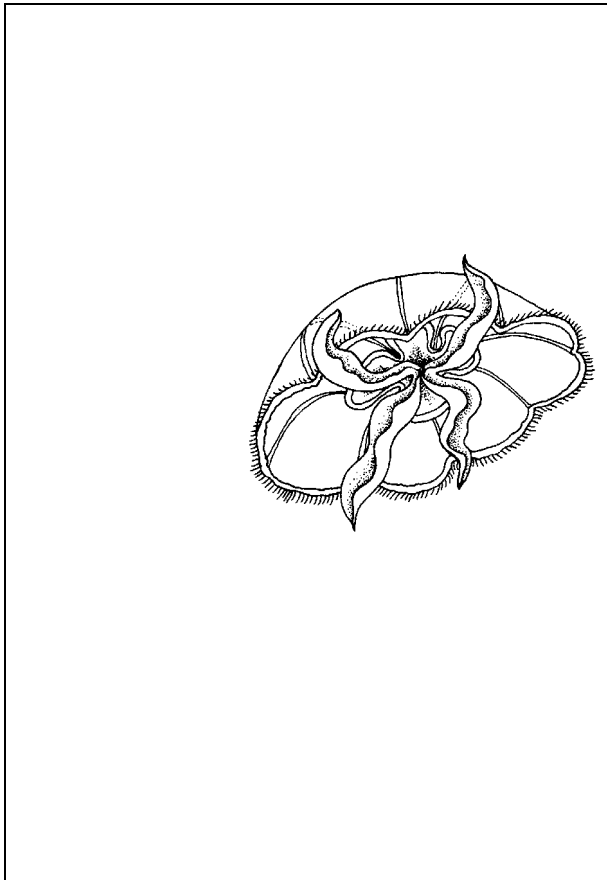


KINGDOM ANIMALIA FOUR KEY EVOLUTIONARY BRANCHES

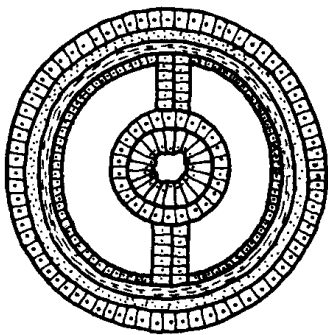
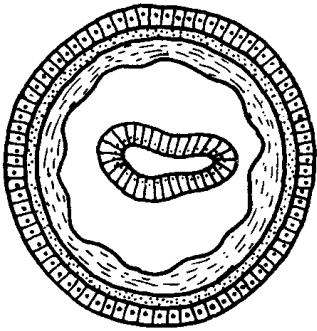
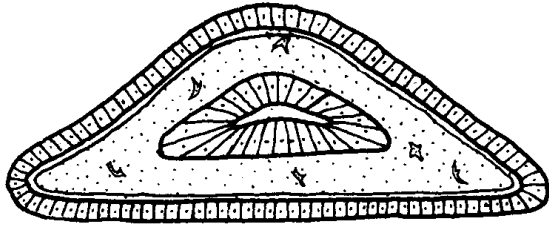
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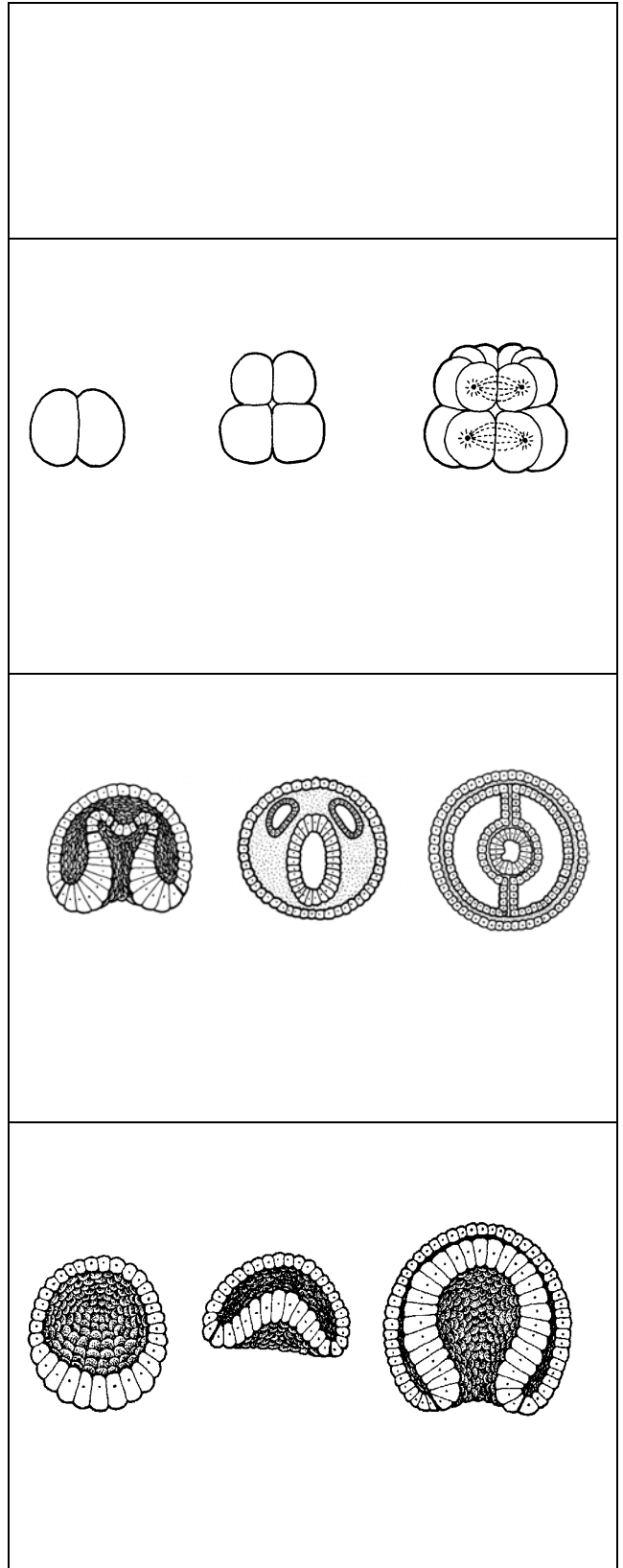
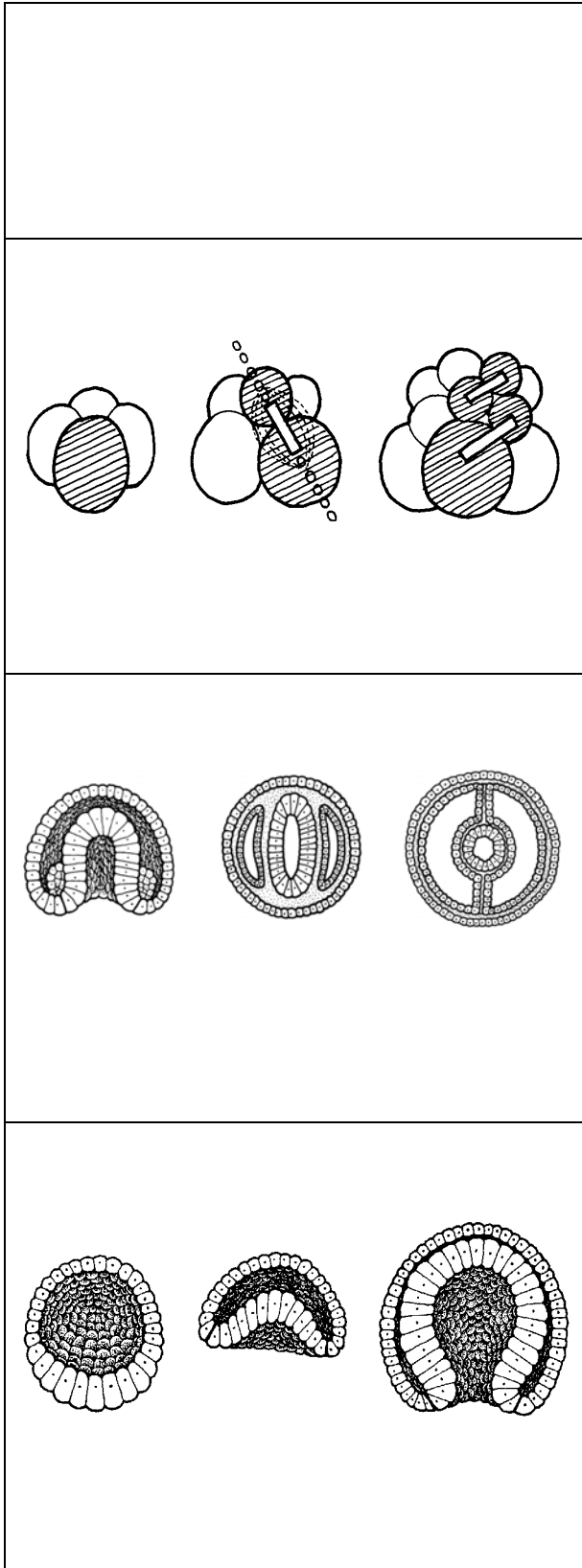
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BRANCH #3

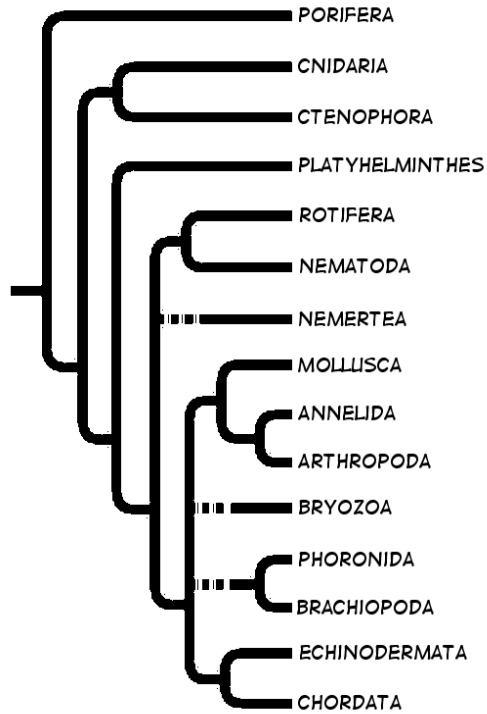


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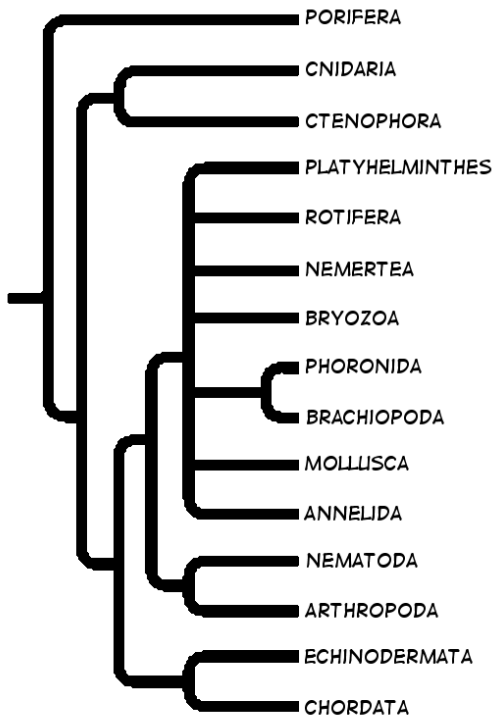


ANIMAL PHYLOGENY

BASED ON BODY- PLAN



BASED ON MOLECULAR COMPARISONS



QUESTIONS:

1. What are the general characteristics of Kingdom Animalia?

2. Match the description or definition with the correct term.

- | | |
|--|---------------------------|
| _____ Lack true tissues | A. Acoelomate |
| _____ True tissues | B. Bilateria |
| _____ Radial symmetry | C. Coelomate |
| _____ Bilateral symmetry | D. Determinate Cleavage |
| _____ Two germ layers | E. Diploblastic |
| _____ Three germ layers | F. Enterocoelous |
| _____ solid body; without a body cavity | G. Eumetazoa |
| _____ Body cavity that is not completely lined with mesoderm | H. Indeterminate Cleavage |
| _____ Body cavity completely lined with mesoderm | I. Parazoa |
| _____ Fate of each cell determined early in development | J. Pseudocoelomate |
| _____ Cells produced by early cleavage retain capacity to develop into complete embryo | K. Radiata |
| _____ Solid mass of cells split to form mesoderm | L. Schizocoelous |
| _____ Mesoderm forms form outpocketings of archenteron | M. Triploblastic |

3. Identify the germ layer (**ectoderm**, **endoderm**, or **mesoderm**) describe in each of the following.

- _____ Innermost germ layer
- _____ Covers the surface of the embryo
- _____ Middle layer

- _____ Gives rise to covering of animal and to the central nervous system in some phyla
- _____ Forms the muscle and most other organs between the gut and outer covering
- _____ Lines the primitive gut (archenteron)
- _____ Gives rise to the digestive tract and its outpocketings (liver and lungs)

4. Use the choices below to complete the following table comparing the major animal phyla.

- Tissue Complexity: Parazoa or Eumetazoa
- Germ Layers: DNA (does not apply), two, or three
- Coelom: DNA, Acoelomate, Pseudocoelomate, or Coelomate
- Embryonic Development: DNA, Protostome, or Deuterostome

Phylum	Tissue Complexity	Germ Layers	Coelom	Embryonic Development
Porifera				
Cnidaria				
Platyhelminthes				
Nematoda				
Mollusca				
Annelida				
Arthropoda				
Echinodermata				
Chordata				

5. Identify each of the following as true of **P**rotostomes or **D**euterostomes.

_____ Coelomates

_____ Spiral cleavage

_____ Radial cleavage

_____ Determinate cleavage

_____ Indeterminate cleavage

_____ Blastopore → mouth

_____ Blastopore → anus

_____ Schizocoelous

_____ Enterocoelous

6. Identify the group of mammals represented by each of the following.

A. Eutherians

C. Monotremes

B. Marsupials

_____ Lay eggs

_____ Pouched animals

_____ Placentals

_____ Platypus, echidna

_____ Kangaroo, opossum

_____ Lion, tigers, bears, humans