

Metabolism Notes

Comments/Questions

I. Metabolism and Body Temperature Regulation

A. Metabolism

1. Definition: The sum of all chemical _____ that occur within a living organism to support and maintain life.

B. Ectotherm

1. Definition: An animal with an internal _____ temperature that varies with external (environmental) conditions

2. Examples: fish, amphibians, and reptiles

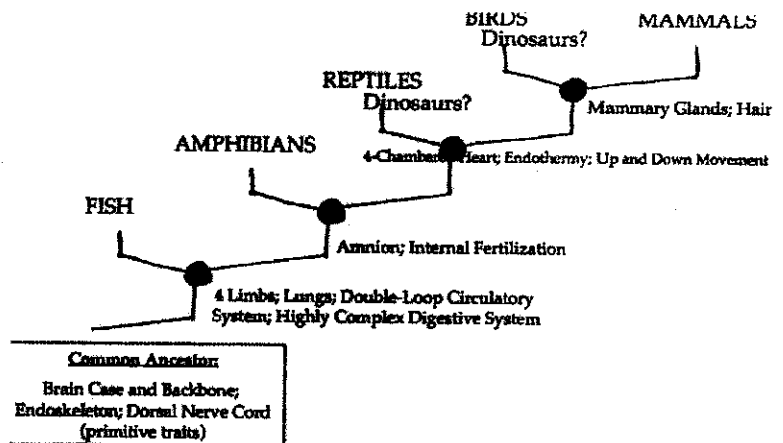
C. Endotherm

1. Definition: An animal with a relatively high, _____ internal body temperature that is regulated internally.

2. Examples: birds, mammals

II. Why We Care:

A. Can help us determine evolutionary relationships



III. Evidence For Metabolism Type

- A. Is an animal ectothermic (_____)
or endothermic (_____)?
- B. Evidence for Ectothermy vs. Endothermy.

See table on snext page

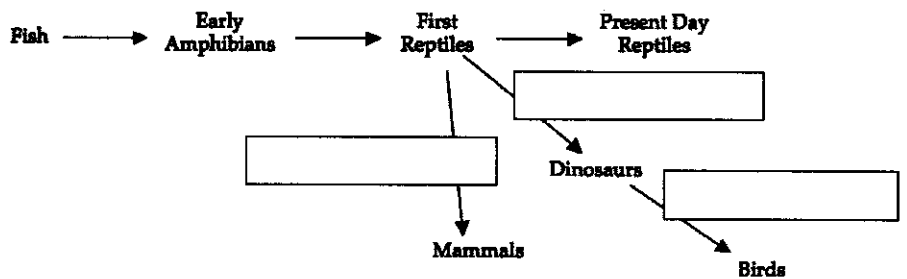
Summary

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EVIDENCE:	ECTOTHERMY:	ENDOTHERMY:
<u>Large Chest Cavity</u>	Large skeleton held large under developed _____	Large _____ and well developed lungs for rapid O ₂ transport
<u>Posture</u>	Legs extend from _____	Legs extend beneath and upright posture allowing for quicker _____
<u>Growth Rate</u>	Slow represented by growth _____	Constant rapid _____
<u>Speed</u>	Slow and sporadic	Constant _____ and fast stride
<u>Food Intake</u>	Require less _____	Require _____ times more food
<u>Water Loss</u> (Turbinates are tiny wisps of bone/cartilage inside nasal cavities of endotherms.)	No turbinates found – (Animal would lose lots of _____ while breathing without turbinates)	Structures in _____ acted as turbinates to prevent water loss
<u>Cold Climates</u>	Hibernation/migration allowed them to - _____ cold climates	Metabolism generated _____ body temperature

III. Vertebrate Evolution Based on Dinosaur Metabolism



Summary