

The Mammalian Body (p. 800 – 816)

I. Key Characteristics Of Mammals

1. Why does the mammalian kidney help mammals retain water better than reptiles?

- Has an exceptional ability to concentrate waste products in a small volume of urine

2. Only mammals have hair.

Circle One : True False

3. What is the main function of hair? Insulation (Fat helps too!)

4. List three other uses of mammalian hair other than insulation.

1. Camouflage 2. Sensory Functions (Whiskers) 3. Specialized (Quills)

II. Mammalian Teeth

1. List four uses of mammalian teeth.

1. Secure Food 2. Chew Food 3. Protection (Threat Signal) 4. Perform Tasks (Beavers)

2. Match each type of tooth with the correct uses.

1. A. Incisors A. Used for biting and cutting.
 2. C. Canines B. Used for crushing and grinding.
 3. B. Molars C. Used for stabbing and holding.

3. Mammalian diet can be determined by examining the teeth.

Circle One : True False

Determines type of mammal order.

III. Body Temperature

1. What type of metabolism do mammals exhibit?

Circle One : Endothermic Ectothermic

2. What makes mammal lungs much more efficient than amphibians or reptiles?

- Large internal surface area (Aids exchange of oxygen + carbon dioxide)

3. What is the main muscle that regulates mammalian breathing? Diaphragm
(Intercostal muscles too!)

4. Define the term alveoli.

Alveoli – small, grape-shaped chambers that increase respiratory surface area *(site of O₂/CO₂ exchange)*

5. What type of heart do mammals have?

Circle One : 2-Chambered 3-Chambered 4-Chambered

6. What type of blood circulation do mammals possess?

Circle One : Single-Loop Circulation Double-Loop Circulation

IV. Parental Care

p. 806

1. Define the term mammary glands.

Mammary Glands – glands located on females chest or abdomen that produces a nutrient-rich energy source (milk)

2. What makes milk an ideal food source for mammal young?

- ① Rich in proteins, carbohydrates, + fat
- ② Prevents dehydration (water + calcium)

3. Define the term weaning.

Weaning – time when a mammalian mother stops nursing them *(male participation varies)*

V. Reproduction

1. What type of reproduction occurs with mammals?

p. 808 - 810

Circle One : External Fertilization Internal Fertilization

2. Match the mammal groups with the correct definitions.

- 1. B. Monotremes A. Young develop in female's uterus & nourished by blood.
- 2. C. Marsupials B. Reproduce by laying eggs and possess a cloaca.
- 3. A. Placental C. Offspring born tiny & undeveloped; crawl into a pouch.

3. Marsupial mammals typically have a ^{shorter} longer gestation period than placental mammals.

Circle One : True False

VI. Modern Placental Mammals**1. Match the mammal orders with the correct characteristics and examples.**

P. 812-816

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| 1. <u>T.</u> Artiodactyla | A. Mammals with chisel-shaped front teeth (rabbits, pikas, hares) |
| 2. <u>G.</u> Carnivora | B. Flying mammals (fruit bats, flying foxes, vampire bats) |
| 3. <u>Q.</u> Cetacea | C. Mammals with trunks (African elephants, Indian elephant) |
| 4. <u>B.</u> Chiroptera | D. Body covered with overlapping scales (scaly anteaters) |
| 5. <u>F.</u> Dermoptera | E. Odd-toe ungulates (horses, donkeys, rhinoceroses, tapirs, zebras) |
| 6. <u>U.</u> Edentata | F. Glide on a sheet of skin between legs (flying lemurs) |
| 7. <u>O.</u> Hyracoidea | G. Meat-eating mammals (dogs, cats, bears, raccoons, skunks, pandas) |
| 8. <u>K.</u> Insectivora | H. Pouched mammals (kangaroo, opossum, koalas, wombats, wallaroos) |
| 9. <u>A.</u> Lagomorpha | I. Feed at sea and mate on land (seals, sea lions, walruses) |
| 10. <u>R.</u> Macroscelidea | J. Ground-dwelling with long snout & sharp teeth (tree shrews) |
| 11. <u>H.</u> Marsupialia | K. Arthropod-eating mammals (shrew, moles, hedgehogs) |
| 12. <u>S.</u> Monotremata | L. Gnawing mammals (rats, beavers, guinea pigs, capybara, squirrels) |
| 13. <u>E.</u> Perissodactyla | M. Nocturnal mammal with big ears & long snout (aardvarks) |
| 14. <u>D.</u> Pholidota | N. Slow-moving aquatic mammals (manatees, dugongs) |
| 15. <u>I.</u> Pinnipedia | O. Rabbit-like mammal with short ears & hooved toes (hyraxes) |
| 16. <u>C.</u> Proboscidea | P. Most intelligent mammals (humans, lemurs, monkeys, apes) |
| 17. <u>P.</u> Primates | Q. Fully aquatic mammals (whales, dolphins, porpoises) |
| 18. <u>L.</u> Rodentia | R. Ground-dwelling, hopping insect eaters (elephant shrews) |
| 19. <u>J.</u> Scandentia | S. Egg-laying mammals (duckbill platypus, short-beaked echidna) |
| 20. <u>N.</u> Sirenia | T. Even-toed ungulates (sheep, cow, hippopotamus, camel, giraffe, pig) |
| 21. <u>M.</u> Tubulidentata | U. Mammals with reduced or absent teeth (anteaters, armadillos) |