

À È P
catlab
mr. c

"may a thousand angels
sing me to my rest..."

The

catlab

a lesson in learning when curiosity (actually) kills
the cat...

Head & Neck ~ lateral view

Animal Dissection Specifics
Kingdom Animalia Study
mr edkart

Safety

1. Know the locations of these items:

- | | | |
|----|----|----|
| a. | d. | g. |
| b. | e. | h. |
| c. | f. | i. |

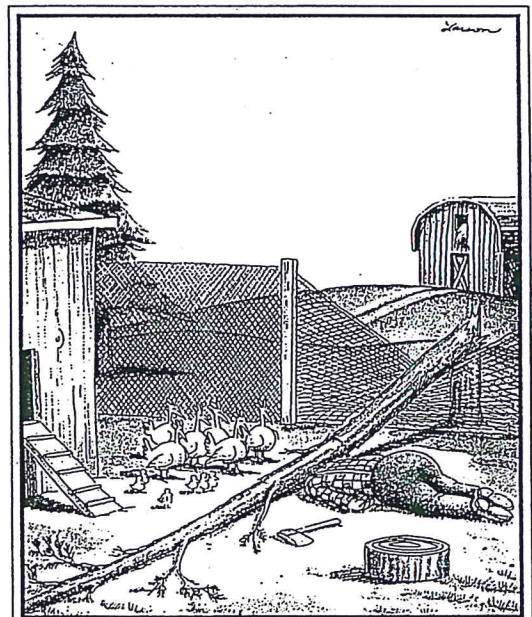
2. Students, whether working in pairs or triumverates, must:

- select one active dissector
- select one reader/recorder
- present dissector with safety equipment in place prior to receiving dissection kit and specimen.

note: Rotate dissection and reading/recorder responsibilities as only ONE STUDENT may actively dissect the specimen at any given time.

3. If any personal injuries, property damage, or specimen decimation occurs during dissection — please notify teacher IMMEDIATELY.

4. Remember, the specimens you dissect are the specimens you will be tested on. The greater your care, the more interpretable (hence easier) your lab practicum.

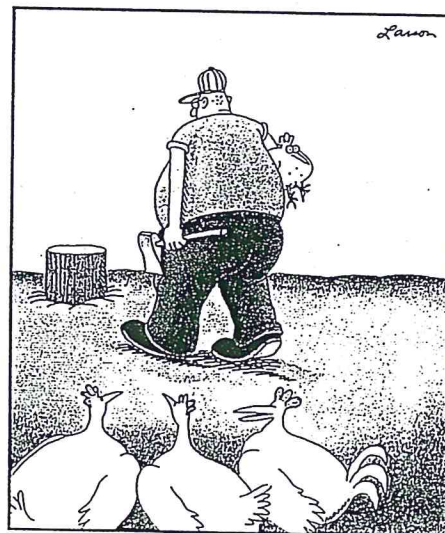
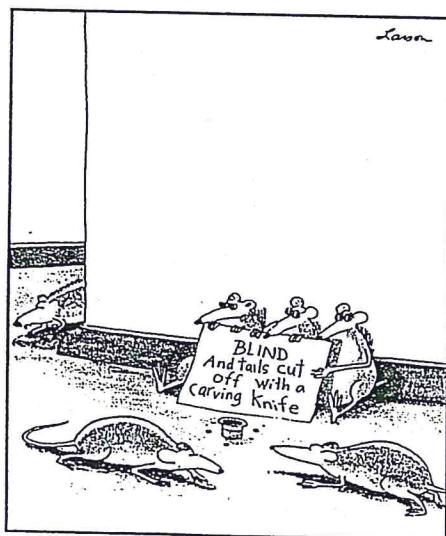


"Lord, we thank thee."

Procedure

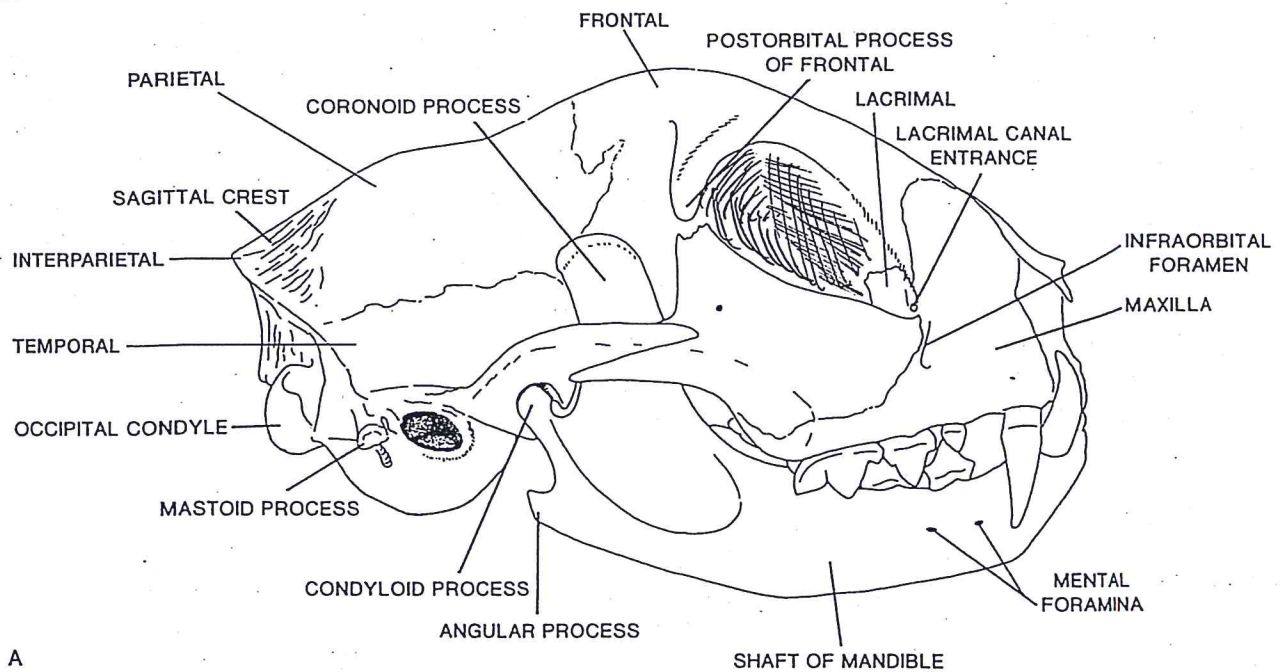
Part A. The Technique of Animal Dissection

1. Dissection is the technique of exposing the internal structures of an organism for observation. Dissection is commonly used in the study of large and complex plants and animals. The opportunity to dissect an animal should be thought of as a unique opportunity to gain firsthand knowledge of an animal you know little about. As you dissect an animal, you should think in terms of structure related to function.
2. Obtain the following tools and instruments needed for dissection: dissecting tray, scalpel, scissors, probe, dissecting pins, and forceps. **CAUTION:** *The scalpel, scissors, and probe are sharp. Use extreme caution when handling these instruments to avoid cuts. Always cut in a direction away from your hands and body.* Become familiar with these tools and instruments used in dissection.
3. Most cutting in dissection is done with scissors rather than a scalpel. Most of the actual dissection involves the forceps, probe, and fingers. These instruments are used to tear, separate, and move or lift parts instead of cutting them.
4. Read the following rules for dissection.
 - Before beginning a dissection, identify all external parts.
 - Determine the proper order in which internal structures are to be exposed.
 - Identify which structures could be easily damaged if dissection is not done properly.
 - Do not completely remove any body part unless instructed to do so. If a body part is to be removed, leave a small portion of it attached as a reference point.
 - When making the first cut, insert the point of the scissors just below the skin. Cut with short, clipping motions. Keep the lower blade of the scissors pointing upward, away from the internal structure of the animal being dissected.

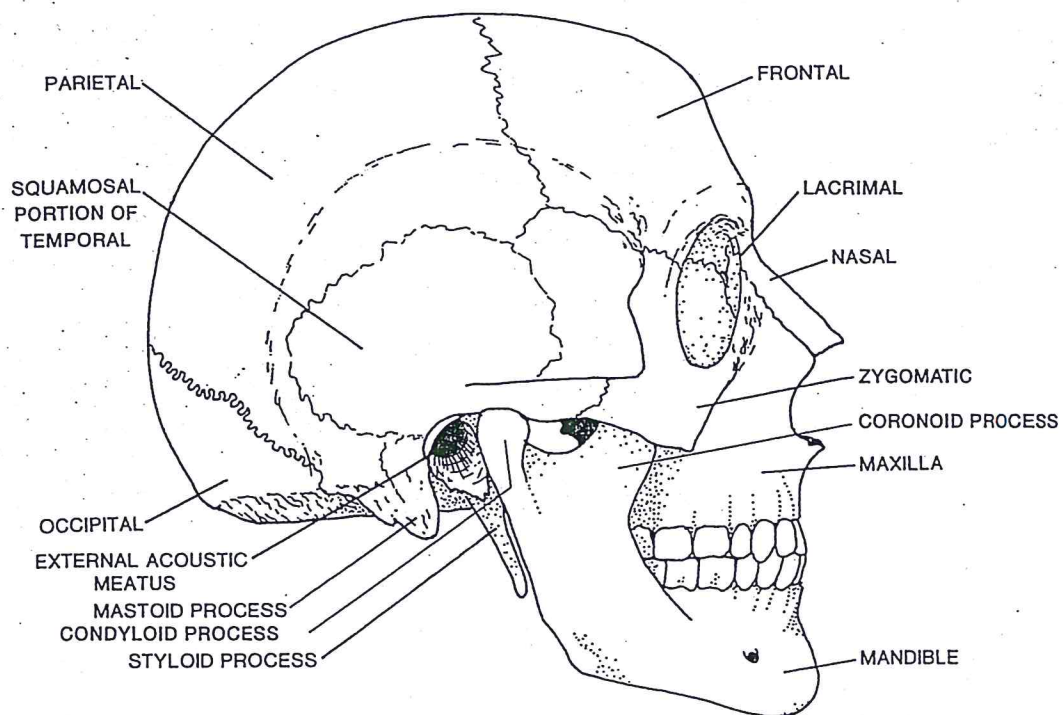


"Well, when it's my turn, I just hope I go quietly ... without a lot of running around."

Mr. Eckart



A



B

FIGURE 3.2

Skull and mandible of the cat (A) and human (B), lateral views.

Instructions

- * Color common bones between cat & human the same color until all pairs are colored.
- ie. frontal (cat) & frontal (human) : red
- maxilla (cat) & maxilla (human) : green etc...

AXIAL/APPENDICULAR SKELETON

Color one view

CN: Use light but contrasting colors for A and B.

(1) First color the axial skeleton A in all three views.

Do not color the intercostal spaces.

(2) Color the appendicular skeleton B.

Note that the bones labeled A are drawn in a lighter line than B.

(3) Color the arrows identifying bone shape/classification.

CLASSIFICATION

OF BONES: *

LONG

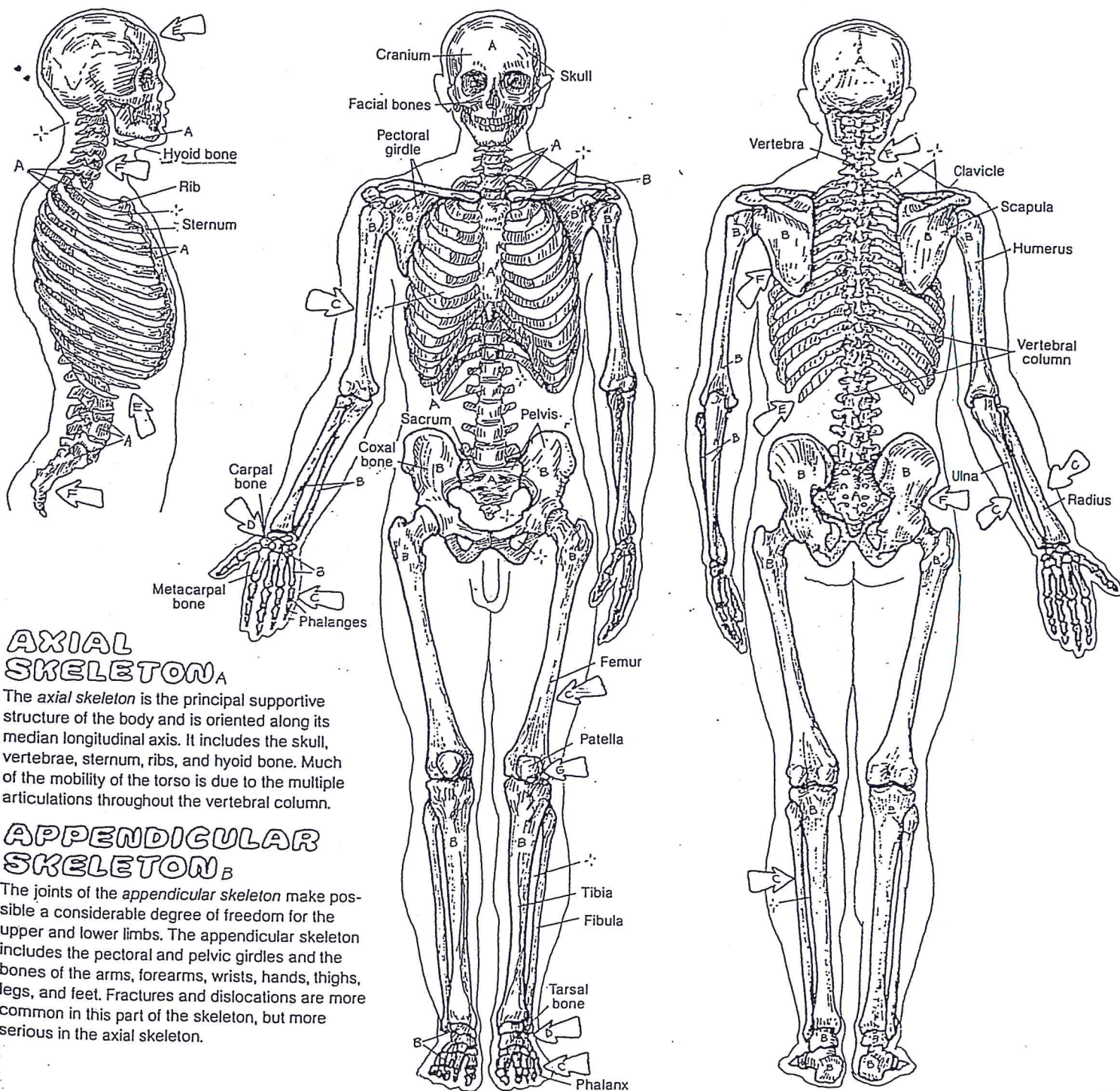
SHORT

FLAT

IRREGULAR

SESAMOID

Bones have a variety of shapes and defy classification by shape; yet such a classification generally exists. *Long bones* are clearly longer in one axis than in another; they are characterized by a medullary cavity, a hollow diaphysis of compact bone, and at least two epiphyses; e.g., femur, phalanx. *Short bones* are roughly cube-shaped; they are predominantly cancellous bone with a thin cortex of compact bone; no cavity; e.g., carpal and tarsal bones. *Flat bones* (cranial bones, ribs) are generally more flat than round, and *irregular bones* (scapula, vertebrae) have two or more different shapes; e.g., the scapula, with a flat surface, and irregular-shaped spine. Bones not specifically long or short fit this latter category. *Sesamoid bones* are developed in tendons (e.g., patellar tendon); they are mostly bone, often mixed with fibrous tissue and cartilage. They have a cartilaginous articular surface facing an articular surface of an adjacent bone; they may be part of a synovial joint ensheathed within the fibrous joint capsule. They are generally pea-sized, and are almost always found in certain tendons/joint capsules in hands and feet, and occasionally in other articular sites of the upper and lower limbs. The largest is the patella, in the tendon of quadriceps femoris. Sesamoid bones resist friction and compression, enhance joint movement, and may assist local circulation.



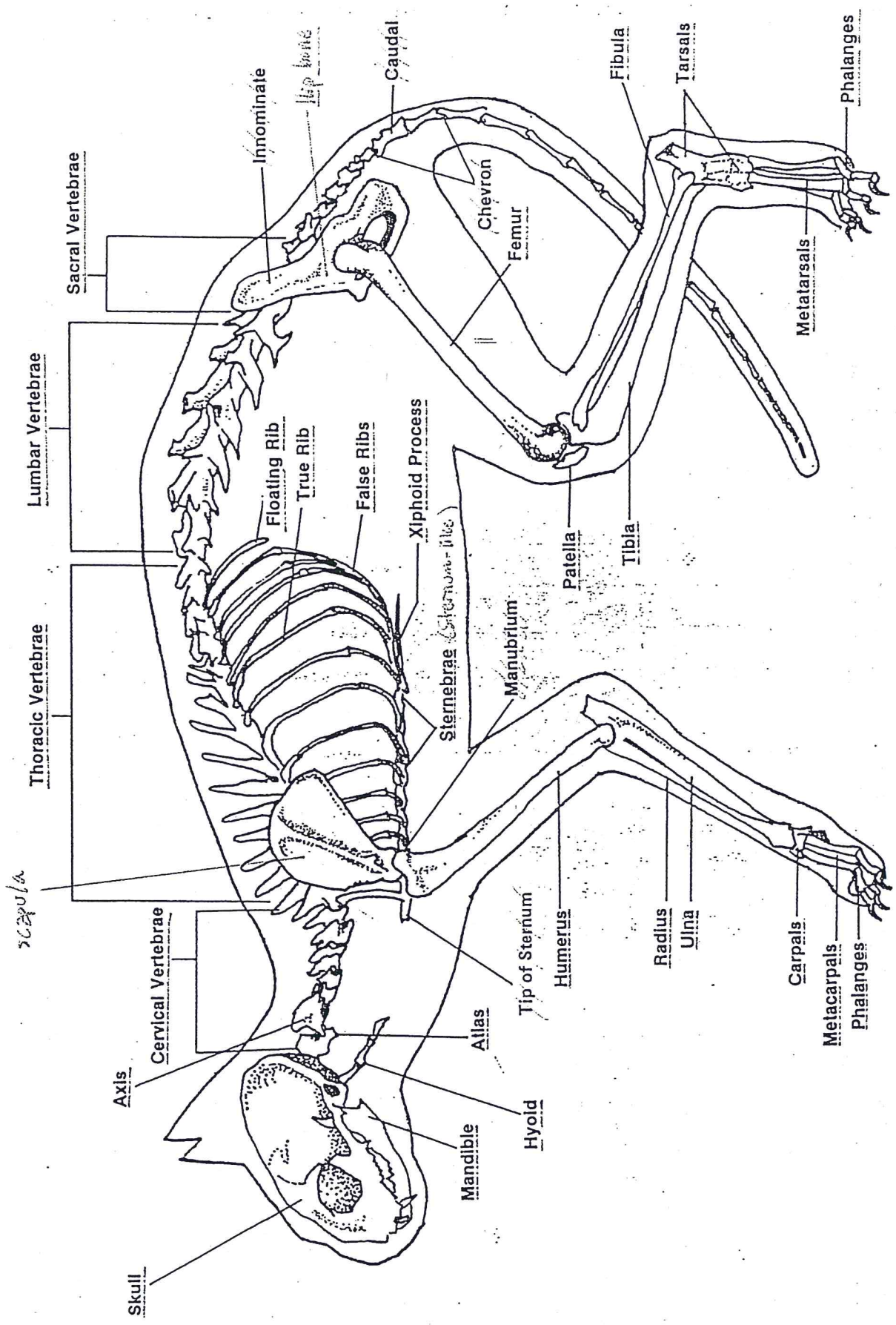
AXIAL SKELETON_A

The *axial skeleton* is the principal supportive structure of the body and is oriented along its median longitudinal axis. It includes the skull, vertebrae, sternum, ribs, and hyoid bone. Much of the mobility of the torso is due to the multiple articulations throughout the vertebral column.

APPENDICULAR SKELETON_B

The joints of the *appendicular skeleton* make possible a considerable degree of freedom for the upper and lower limbs. The appendicular skeleton includes the pectoral and pelvic girdles and the bones of the arms, forearms, wrists, hands, thighs, legs, and feet. Fractures and dislocations are more common in this part of the skeleton, but more serious in the axial skeleton.

key



CAT SKELETON

1st from the front
1st @ spine to the right

28 points

Dentition
cat vs. human

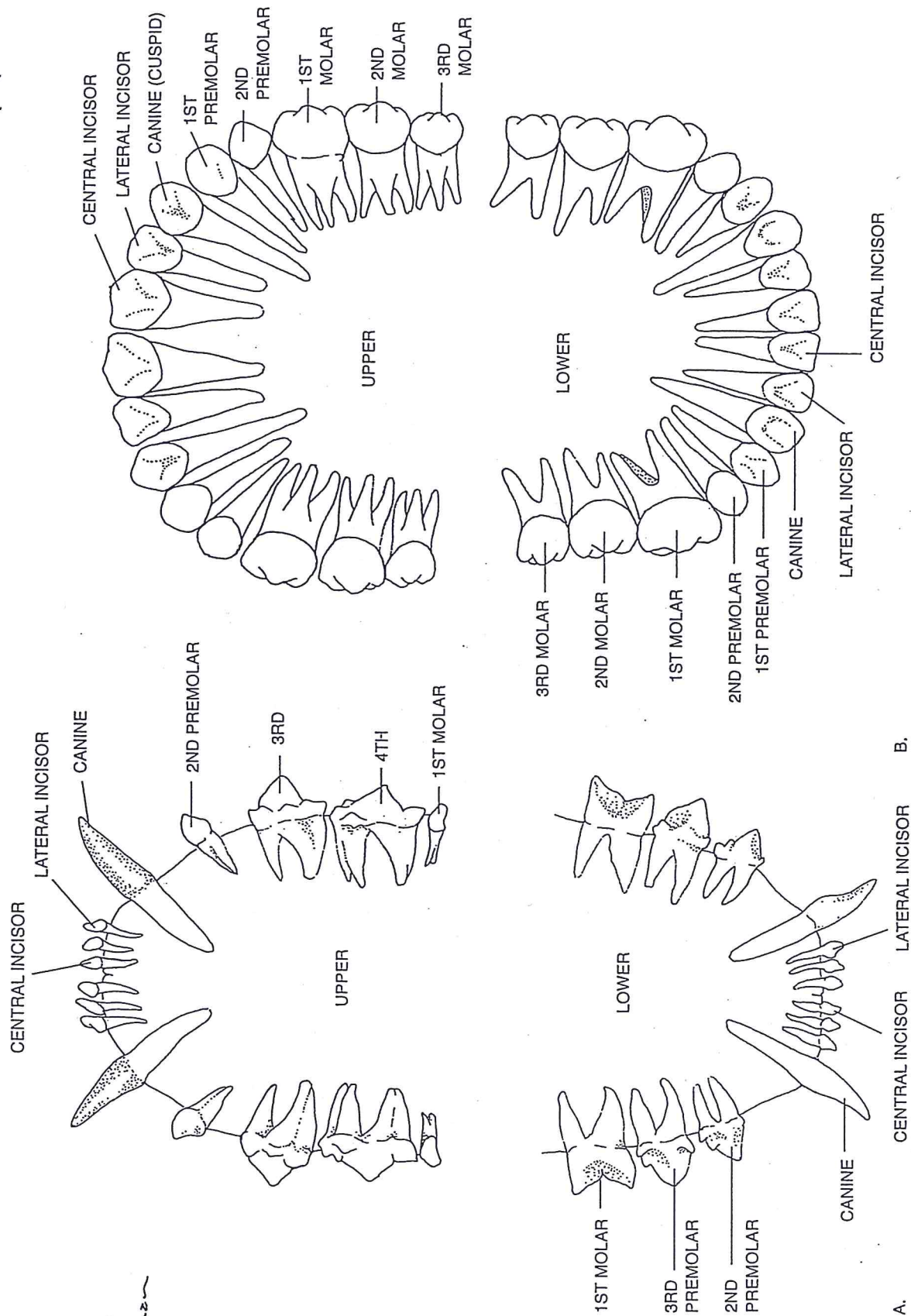


FIGURE 3.10

Dental patterns of the cat (A) and human (B). The primitive condition in mammals is 3/3 incisors, 1/1 canine, 4/4 premolars, and 3/3 molars. Felidae have 3/3, 1/1, 2 or 3/3, and 1/1. In cats the first premolar is absent on the maxilla and the first and fourth on the mandible. The caudal three molars are lost on both jaws. Therefore the premolars are numbered two, three, and four on the upper jaw and two and three on the lower.

Instructions : color all common teeth between the cat and the human

ie. central incisors : one color 2nd molar : not found on cat (do not color)
1st molars : another color etc...

A&P: Catlab - muscular system
 superficial muscle help sheet

* know

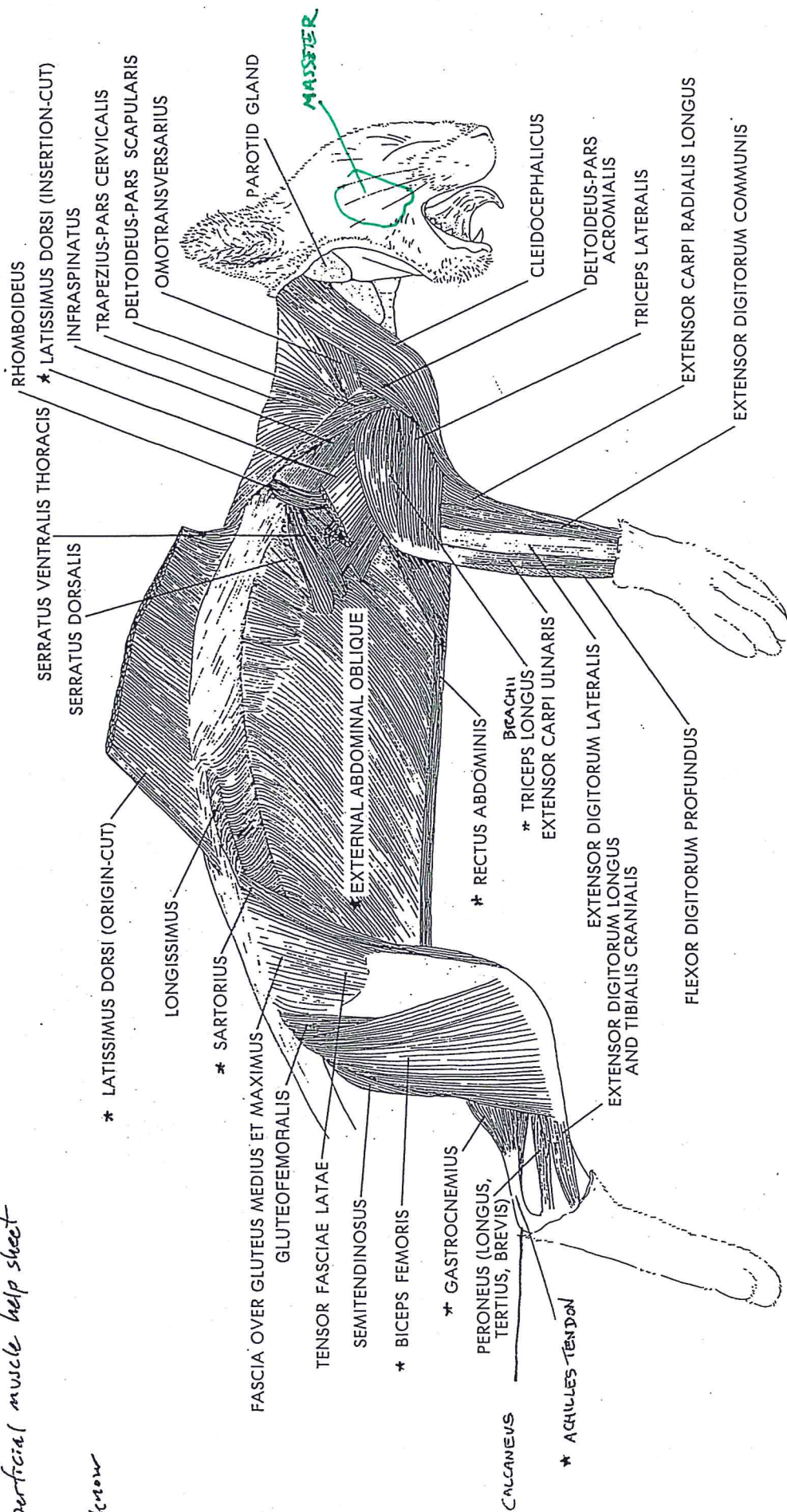


FIGURE 4.18. Lateral view of the cat superficial trunk and limb musculature.

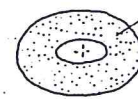
* note: muscles included in praxium, but not shown:

sternomastoid	internal oblique	soleus
pectoralis major	transverse abdominis	fibularis anterior
pectoralis minor (*larger)	masseter	
(linea alba)	temporalis	

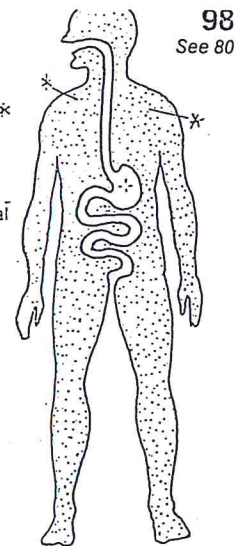
X. DIGESTIVE SYSTEM

OVERVIEW OF THE SYSTEM

CN: When coloring the organs that overlap each other, use your lightest colors for D, E, T, V, and W. Each overlapping portion receives the color of both structures. (1) After coloring the alimentary canal, review the structures before completing the accessory organs. The central section of the transverse colon (J) has been removed to show deeper structures.



Alimentary canal is like the hole in a doughnut



98
See 80

ALIMENTARY CANAL: *

ORAL CAVITY^A

PHARYNX^B

ESOPHAGUS^C

STOMACH^D

SMALL INTESTINE: *

DUODENUM^E

JEJUNUM^F

ILEUM^G

LARGE INTESTINE: +

CECUM^H

VERMIFORM APPENDIX^{H'}

ASCENDING COLON^I

TRANSVERSE COLON^J

DESCENDING COLON^K

SIGMOID COLON^L

RECTUM^M

ANAL CANAL^N

ACCESSORY ORGANS: *

TEETH.

TONGUE^P

SALIVARY GLANDS: *

SUBLINGUAL^Q

SUBMANDIBULAR^R

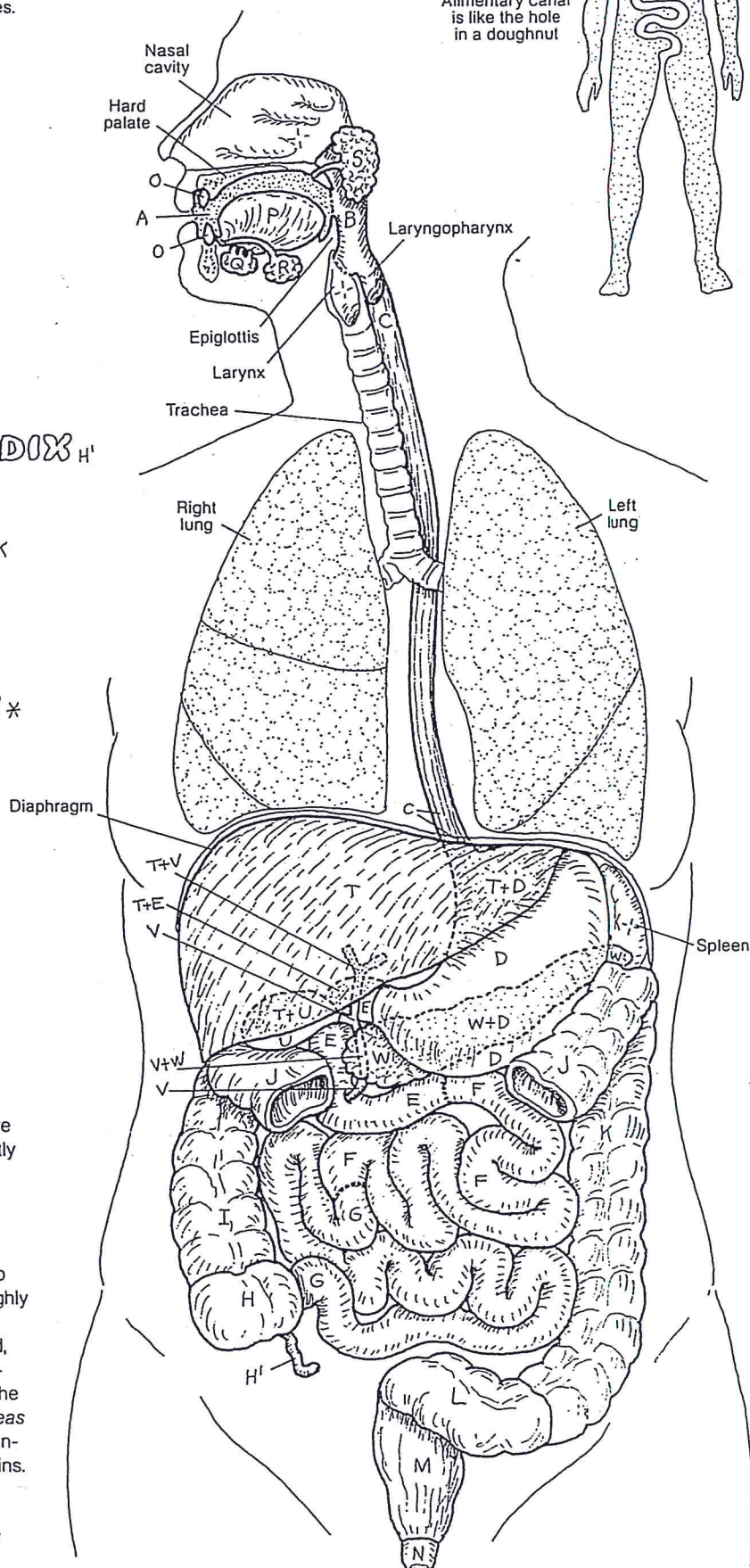
PAROTID^S

LIVER^T

GALL BLADDER^U

BILE DUCTS^V

PANCREAS^W



The digestive system consists of an alimentary canal with accessory organs. The canal begins with the oral cavity. Here the *teeth* pulverize ingested food while it is softened and partly digested by *salivary gland* secretions. The *tongue* aids in mechanical manipulation of the food, and literally flips the food into the fibromuscular *pharynx* during swallowing.

The *esophagus* moves the bolus along to the *stomach* by peristaltic muscular contractions. Here the bolus is treated to mechanical and chemical digestion, then passed into the highly coiled *small intestine* for more enzymatic and mechanical digestive processes. Small molecular nutrients are extracted, absorbed by lining cells, and transferred to capillaries. Liver-produced bile, stored in the *gall bladder*, is discharged into the duodenum by *bile ducts*. Digestive enzymes from the *pancreas* enter the duodenum as well. The *large intestine* is mainly concerned with absorption of water, minerals, and certain vitamins. The non-nutritive residue of the ingested bolus is moved through the *rectum* and *anal canal* to the outside. Nutrients absorbed throughout the tract are transported to the *liver* by the hepatic portal system for processing and distribution to the body's cells.

Digestive Anatomy of a Cat

CN: Color the human digestive coloring plate according to its instructions. Then color the cat's digestive system components that are common to the human the same color as the human plate.

CAT

