

BONES OF THE SKULL (1)

NAME: _____

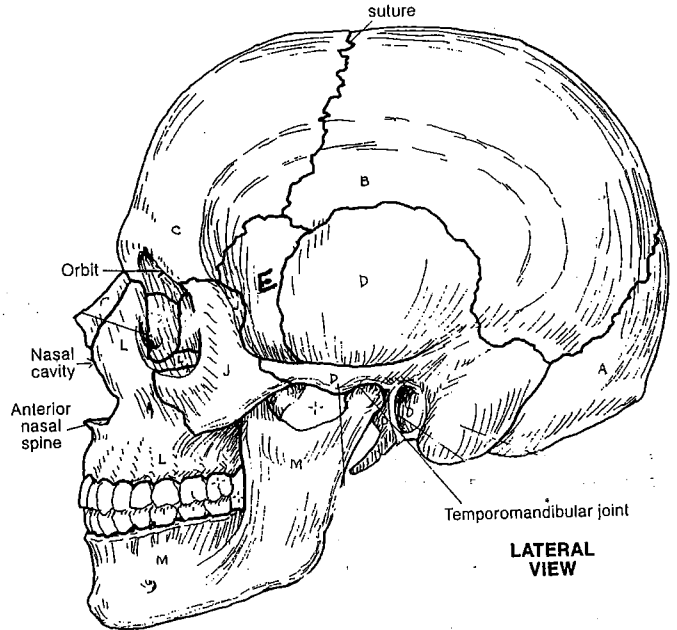
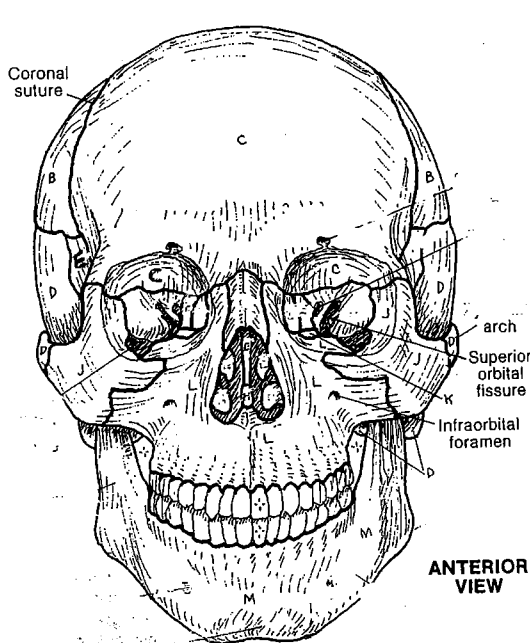
DATE: _____

8 CRANIAL +
 OCCIPITAL, 2 PARIETAL, FRONTAL,
 2 TEMPORAL, SPHENOID &
 14 FACIAL +

2 ZYGOMATIC, 2 MAXILLA L
 MANDIBLE M 2 INFERIOR

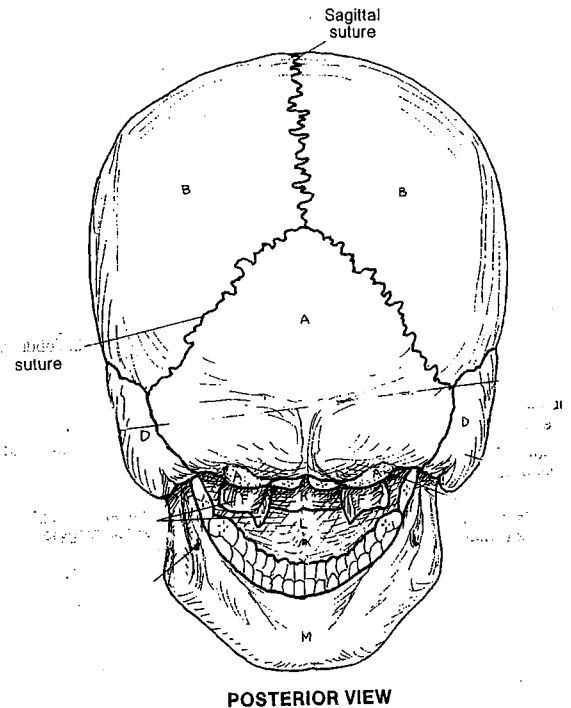
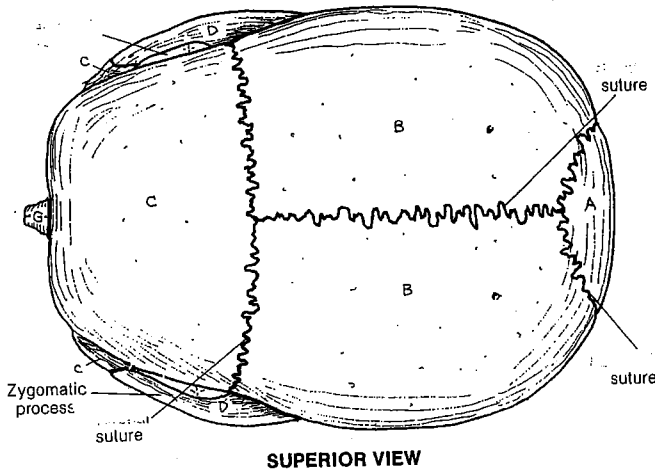
CN: Save the brightest colors for the smallest bones and the lightest colors for the largest. (1) Color one bone in as many views as it appears before going on to the next. (2) There are some very small bones to color in the

orbits and in the lower part of the posterior view of the skull. Study these areas carefully before coloring to determine the color boundaries. (3) Do not color the darkened areas in the orbits and nasal cavity in the anterior view.



The skull is composed of *cranial bones* (forming a vault for the brain) and *facial bones* (giving origin to the muscles of facial expression and providing buttresses protecting the brain). Except for the temporomandibular joint (a synovial joint), all bones are connected by generally immovable fibrous sutures.

The orbit is composed of seven bones, has three significant fissures/canals, and is home to the eye and related muscles, nerves, and vessels. The most delicate of the skull bones is at the medial orbital wall. The external nose is largely cartilaginous and is therefore not part of the bony skull.



VERTEBRAL COLUMN

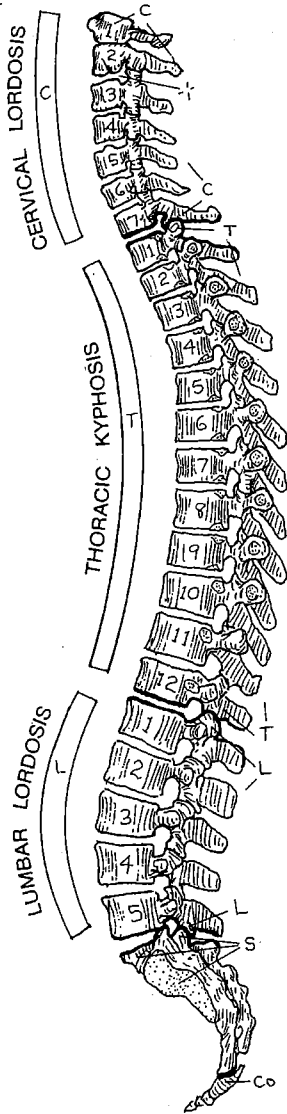
CN: Use gray for D, yellow for H, and light colors for the rest, especially C, T, L, S, and Co. L4 and L5 represent the lumbar vertebrae most involved in motion. (1) Begin with regions of the column and the three examples of vertebral disorders at lower left. (2) Color the motion segment and its role in flexion and extension. (3) Color the vertebral foramina and canal. (4) Color the example of a protruding intervertebral disc pressing on a spinal nerve.

REGIONS
CERVICAL c
THORACIC T
LUMBAR L
SACRAL s
COCCYGEAL co

The vertebral column has 24 individual vertebrae arranged in *cervical*, *thoracic*, and *lumbar* regions; the *sacral* and *coccygeal* vertebrae are fused (sacrum/coccyx). Numbers of vertebrae in each region are remarkably constant; rarely S1 may be free or L5 may be fused to the sacrum (transitional vertebrae). The seven mobile cervical vertebrae support the neck and the 3-4 kg (6-8 lb) head. The cervical spine is normally curved (*cervical lordosis*) secondary to the development of postural reflexes about three months after birth. The 12 thoracic vertebrae support the thorax, head, and neck. They articulate with 12 ribs bilaterally. The thoracic spine is congenitally curved (*kyphosis*) as shown. The five lumbar vertebrae support the upper body,

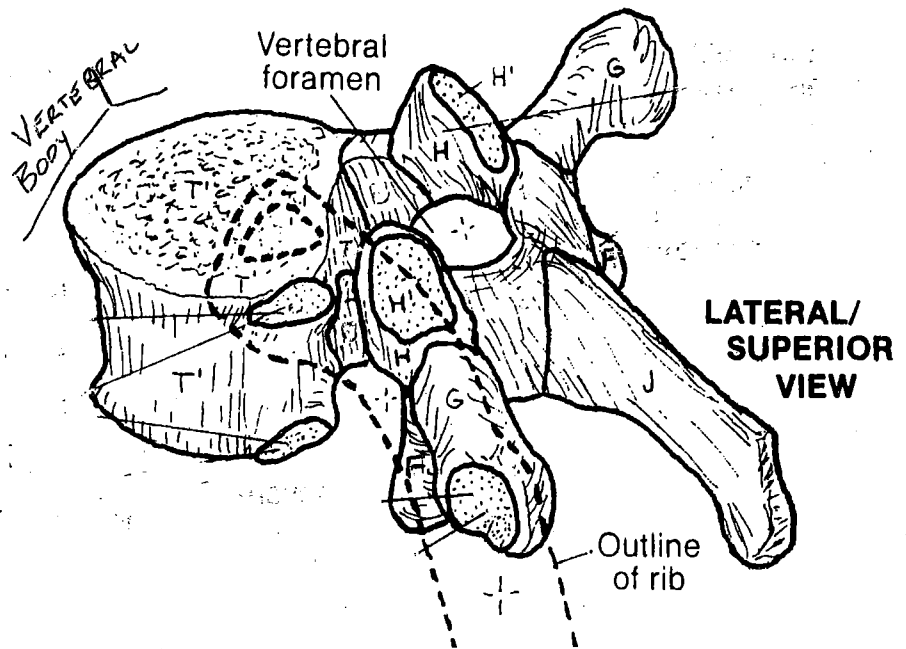
torso, and low back. The column of these vertebrae becomes curved (*lumbar lordosis*) at the onset of walking at 1-2 years of age. The sacrum is the key-stone of a weightbearing arch involving the hip bones. The sacral/coccygeal curve is congenital. The variably numbered 1-5 coccygeal vertebrae are usually fused, although the first vertebra may be movable.

Vertebral curvatures may be affected (usually exaggerated) by posture, activity, obesity, pregnancy, trauma, and/or disease; these conditions are given the same names as the normal curves. A slight lateral curvature to the spine often reflects dominant handedness; a significant, possibly disabling, lateral curve (*scoliosis*) may occur for many reasons.

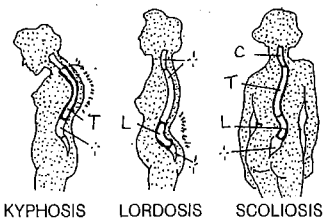


F - INFERIOR PROCESS
 T' - VERTEBRAL BODY
 J - SPINOUS PROCESS
 G - TRANSVERSE PROCESS
 H - SUPERIOR PROCESS

TYPICAL THORACIC (T5) VERTEBRA



VERTEBRAL DISORDERS



BONY THORAX

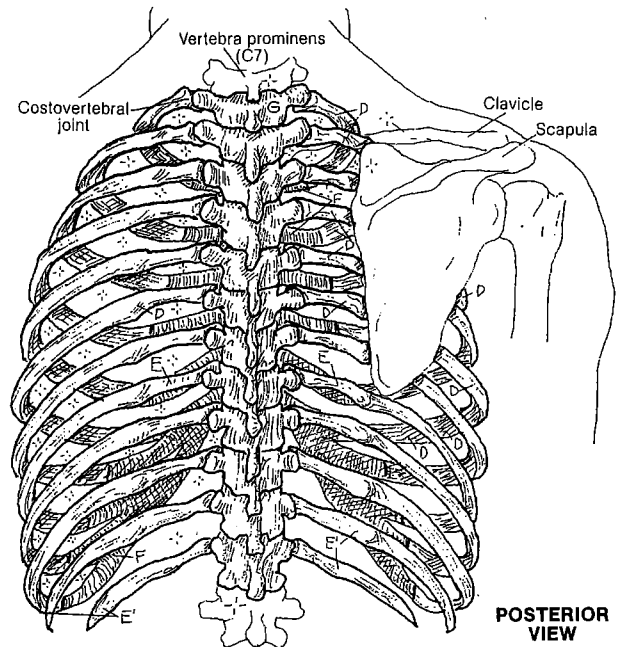
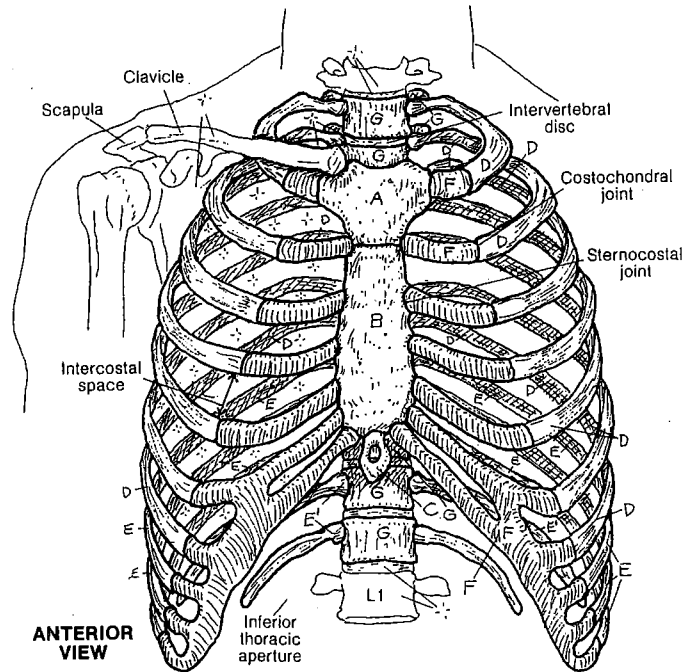
CN: Use the same colors as were used on Plate 22 for true ribs, thoracic vertebrae, demifacets, and transverse process facets. Use bright colors for A-C. (1) Color the anterior view of the bony thorax. Color each rib completely before going on to the next. (2) Color the posterior

view in the same manner. (3) Color the lateral view of the bony thorax. (4) When coloring the drawings of a rib and the sites of articulation, note that the rib facets (drawn with dotted lines) are to be colored even though they are on the underside of the rib.

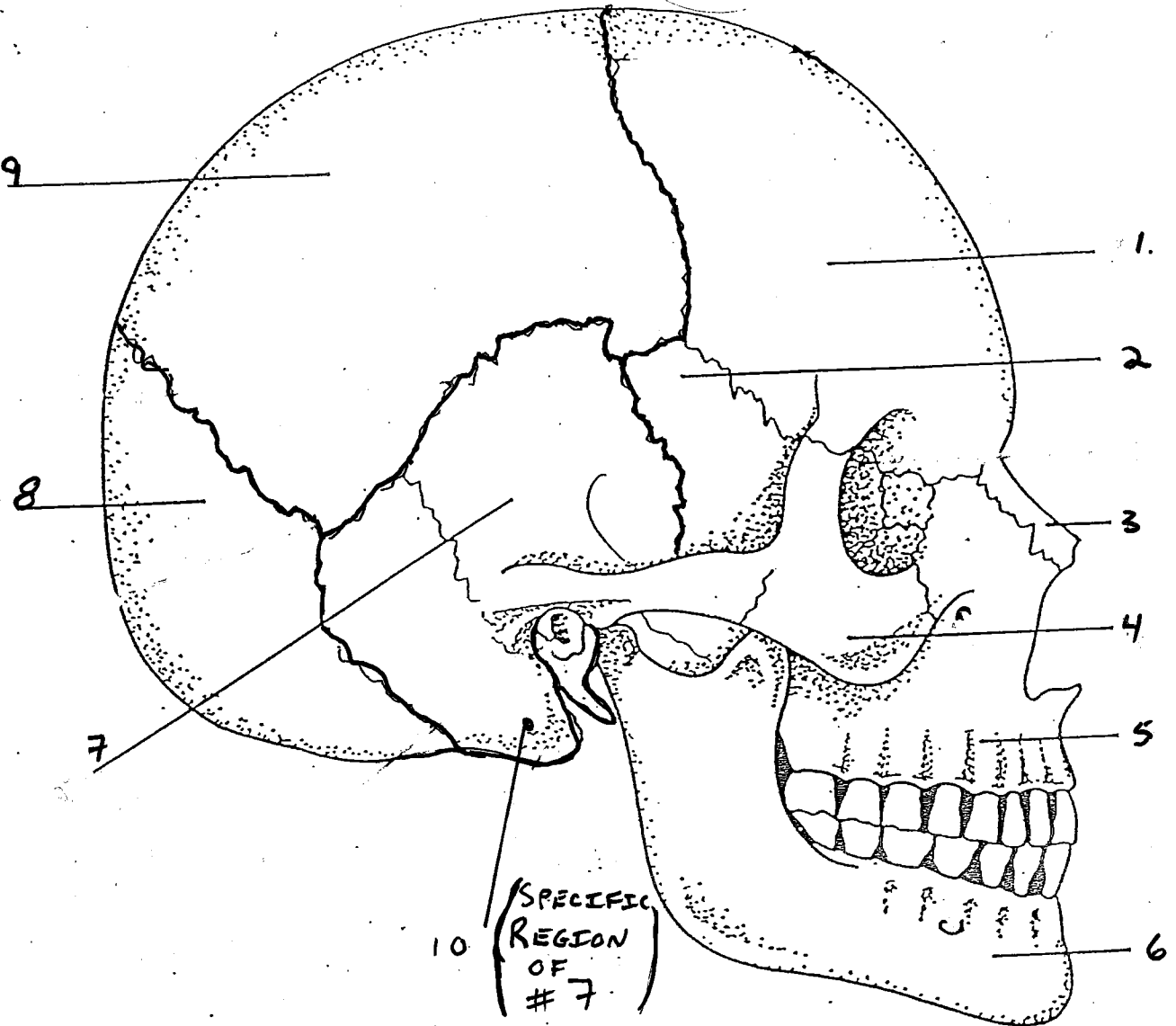
STERNUM (A, B + C - D₀)
 MANUBRIUM_A
 BODY
 XIPHOID PROCESS_C

12 RIBS +
 7 TRUE_D
 5 FALSE_E
 (2 FLOATING)_F

Use Different Colors And Do Carefully
COSTAL CARTILAGE (10)_F
THORACIC VERTEBRA (12)_G



Skull Viewed from the Right Side



- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____
- 7. _____
- 8. _____
- 9. _____
- 10. _____