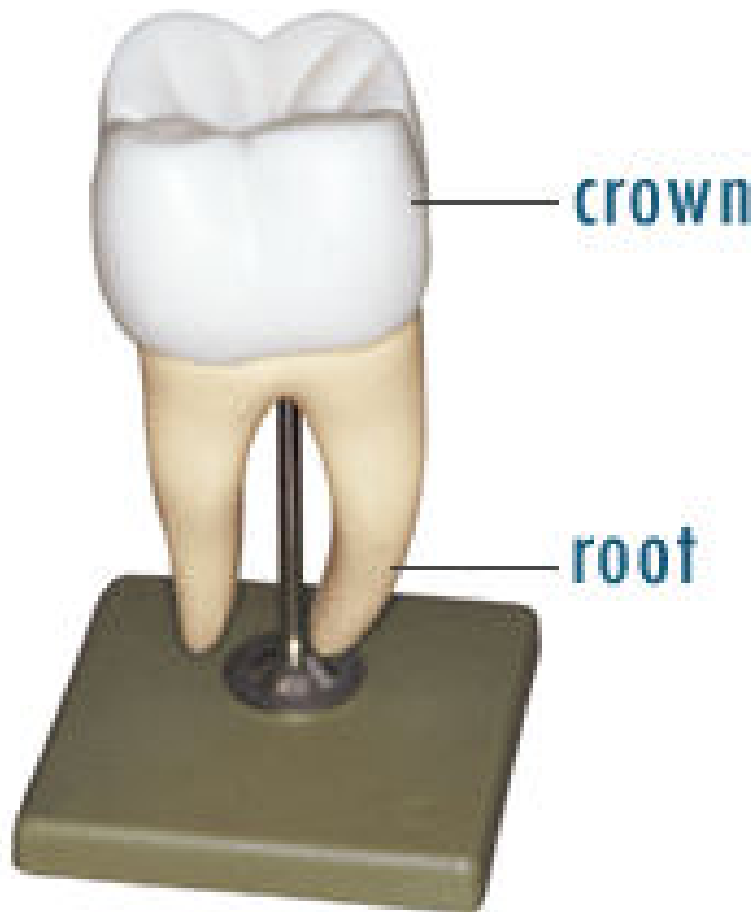




Tooth Morphology

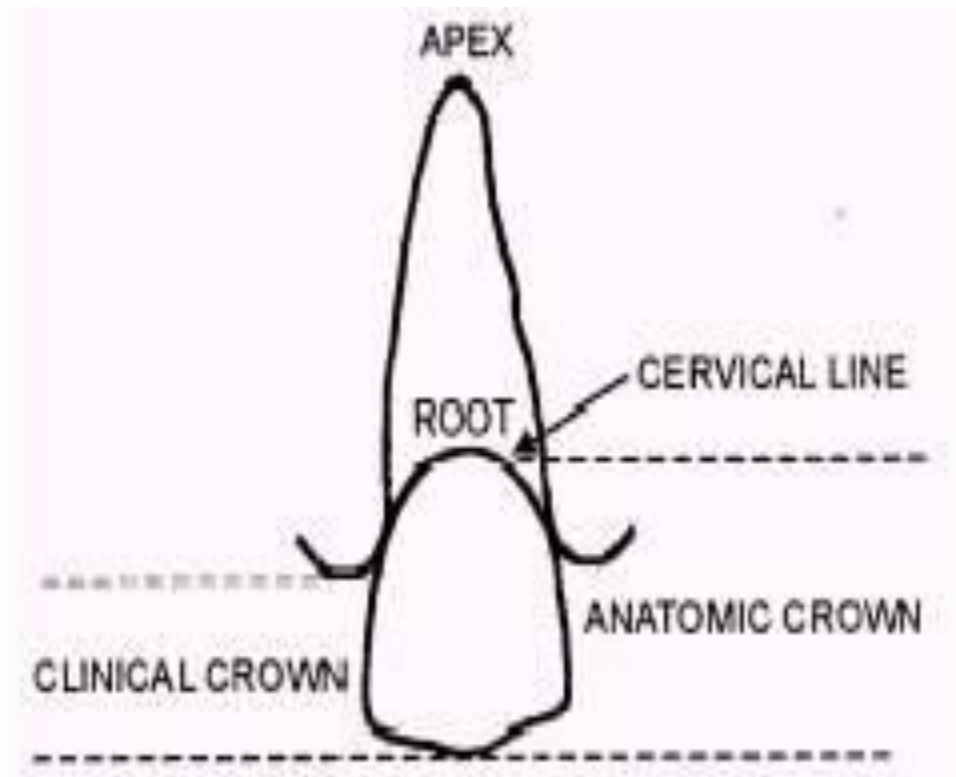
NOMENCLATURE

Crown & Root

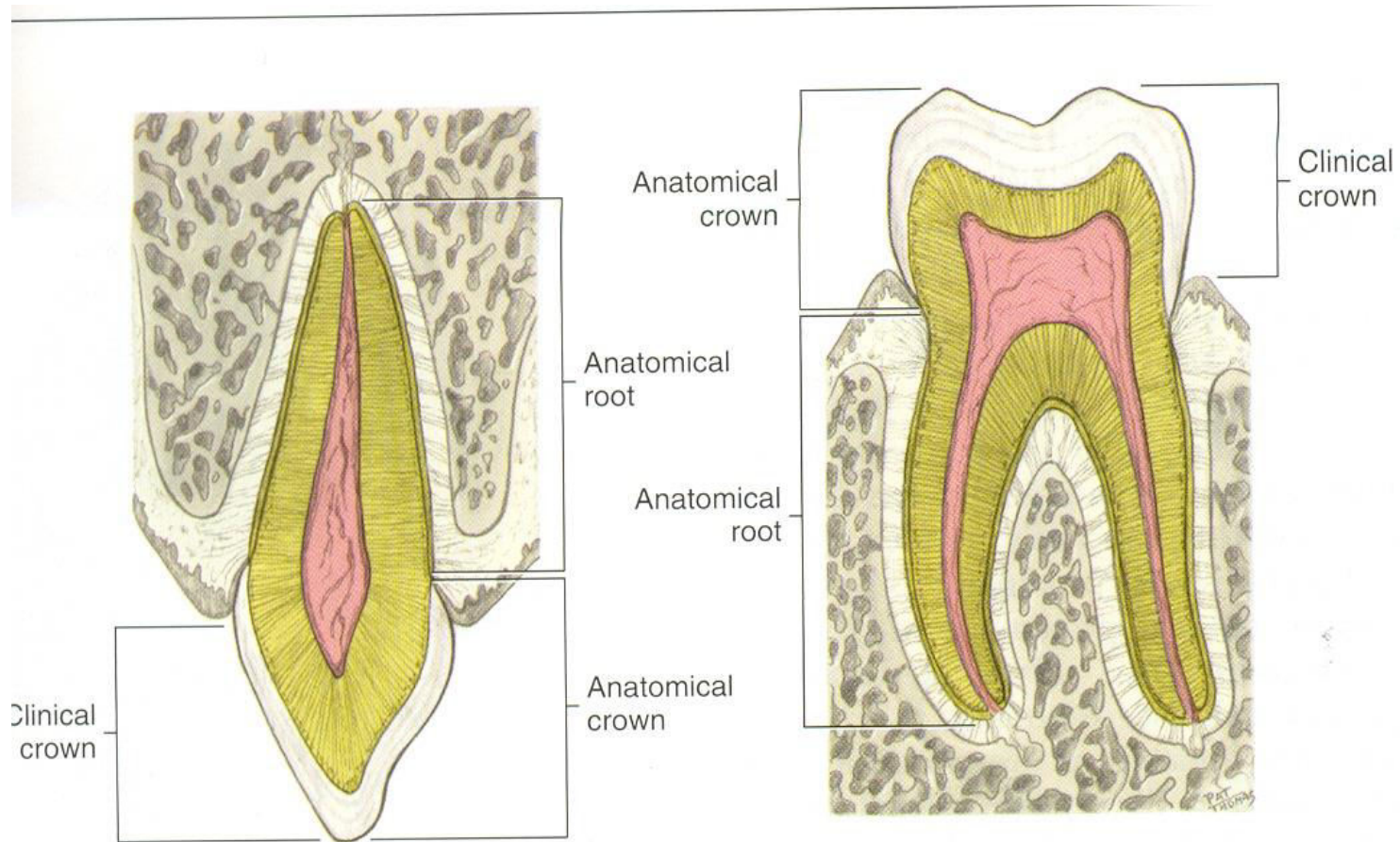


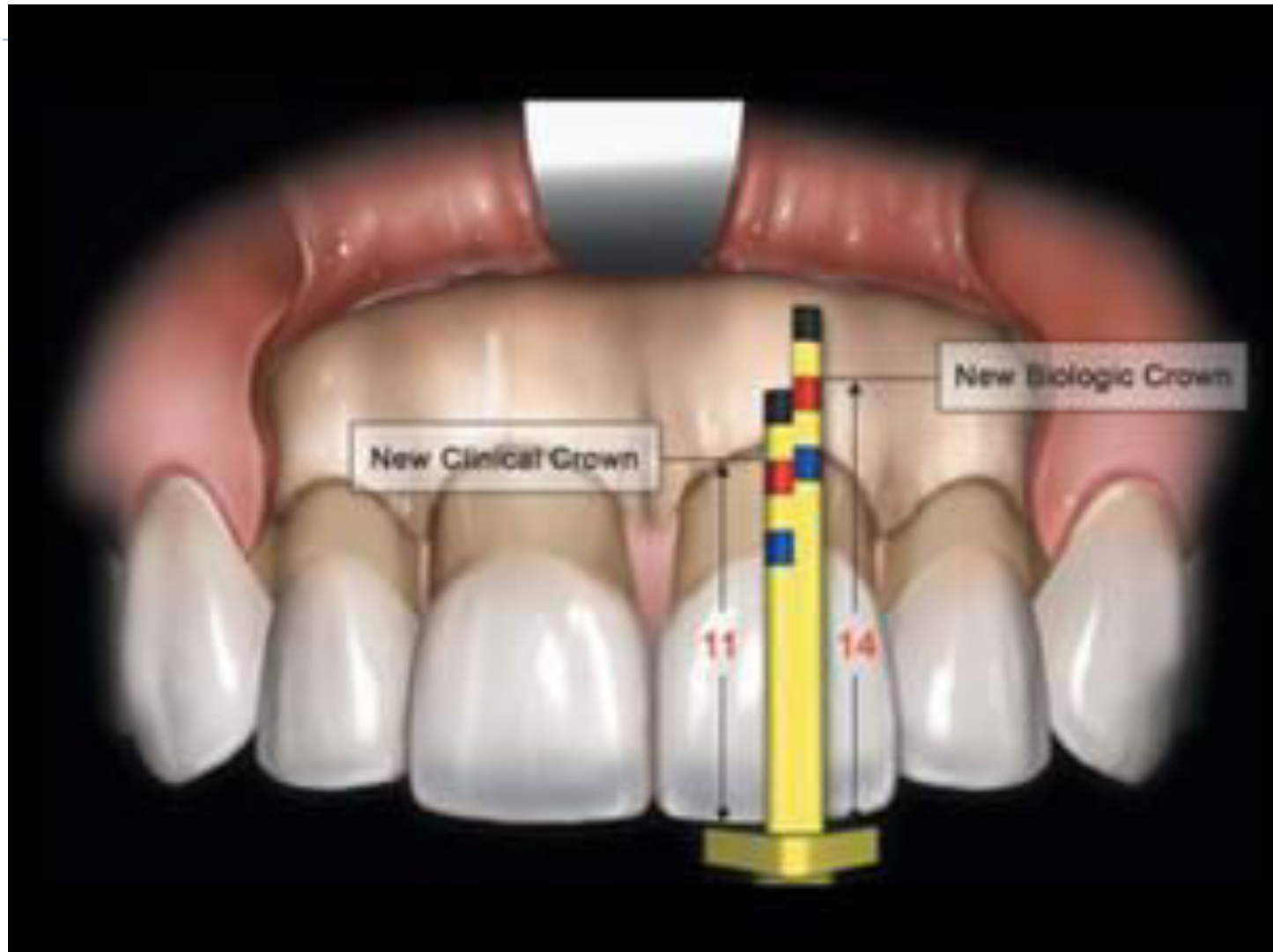
- ▶ Crown-The portion of tooth visible in the oral cavity
- ▶ Root –the portion of tooth embedded in the bone

Anatomical & Clinical Crown



- ▶ Anatomical crown- from the incisal edge /tip of cusp to the cervical line
- ▶ Clinical crown -from the incisal edge /tip of cusp to the gingiva (exposed portion)





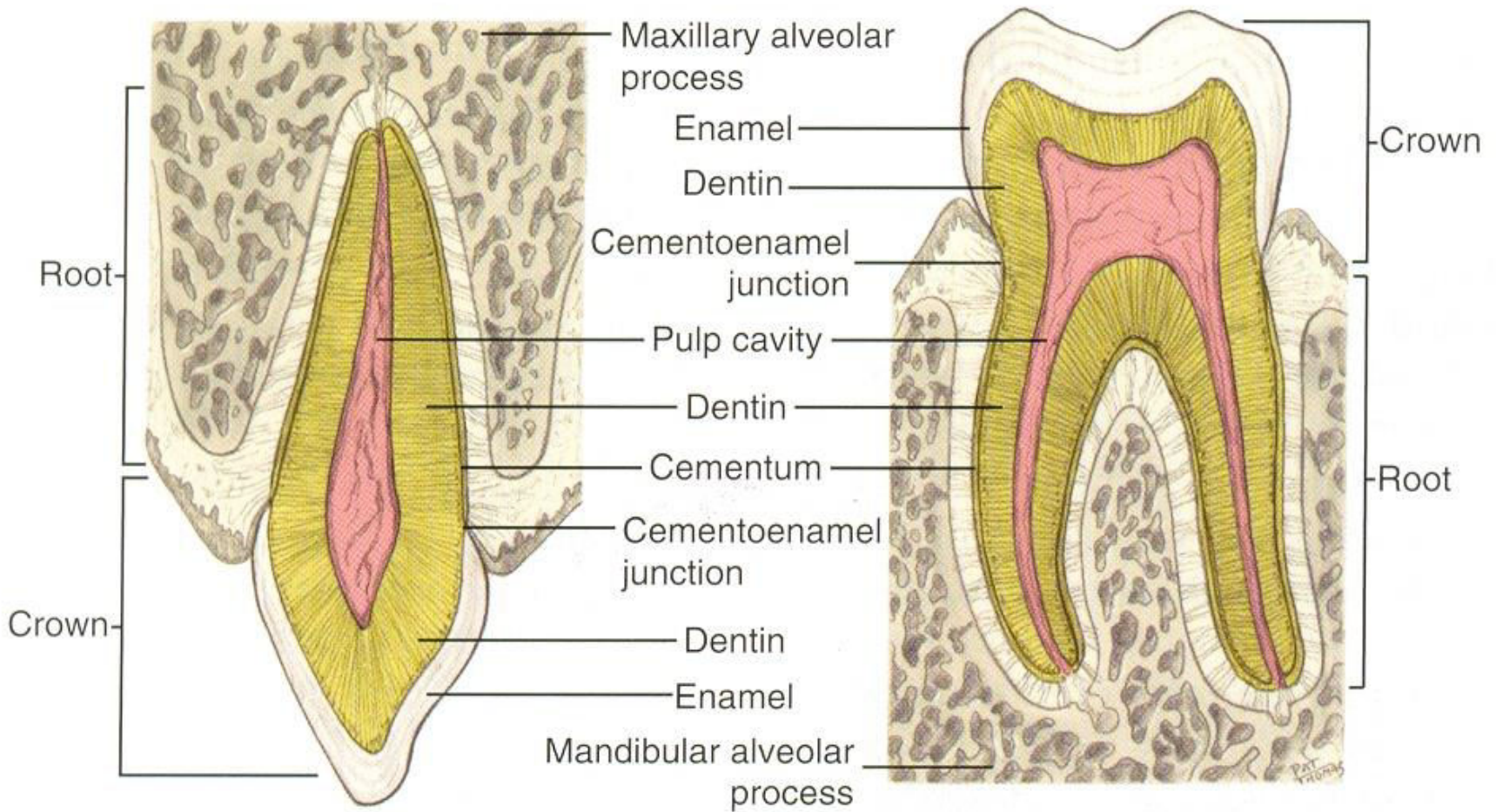
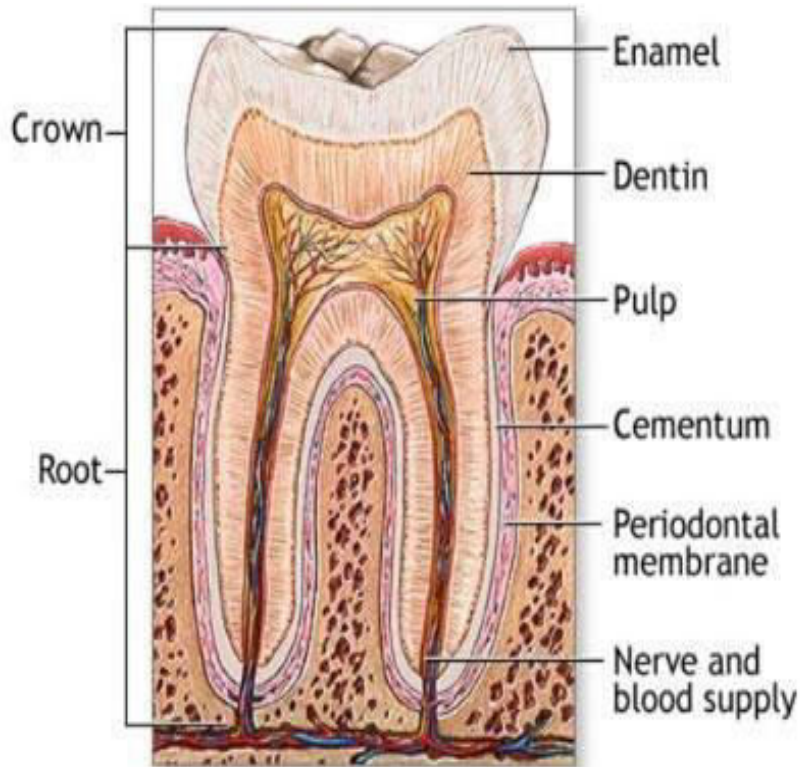
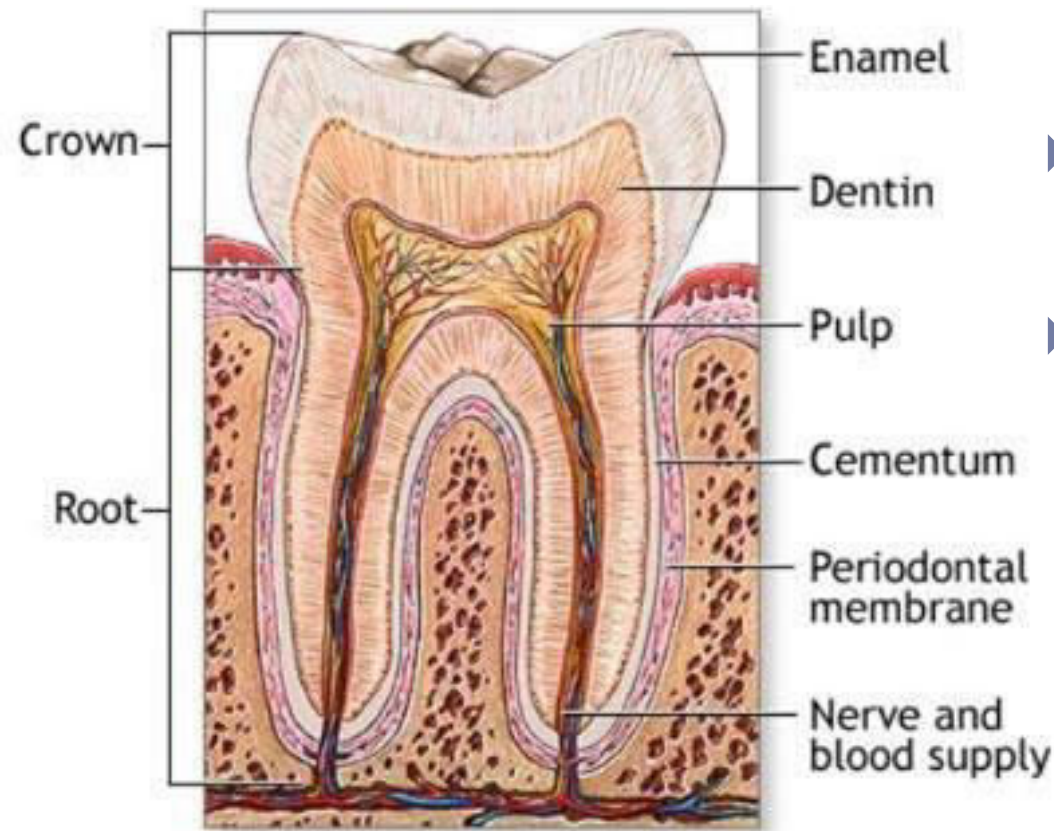


FIGURE 15-7 An anterior and a posterior tooth showing the dental tissues.

Tissues of tooth

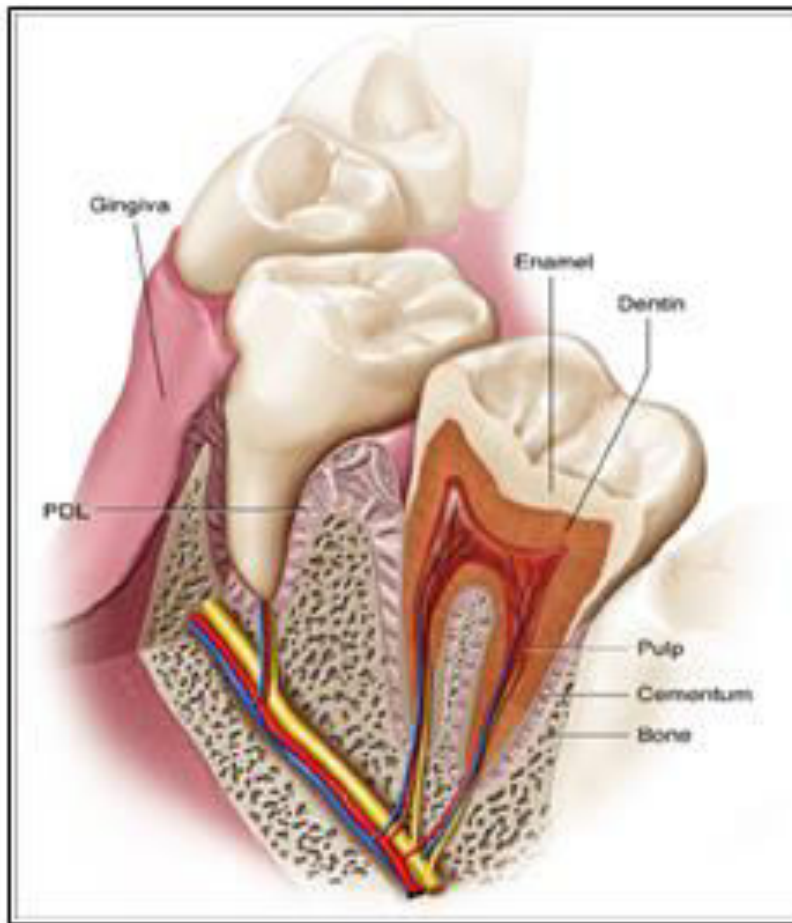


- ▶ Enamel
 - ▶ Dentin
 - ▶ Cementum
- Hard/Mineralised tissues
- ▶ Pulp
- Soft tissue

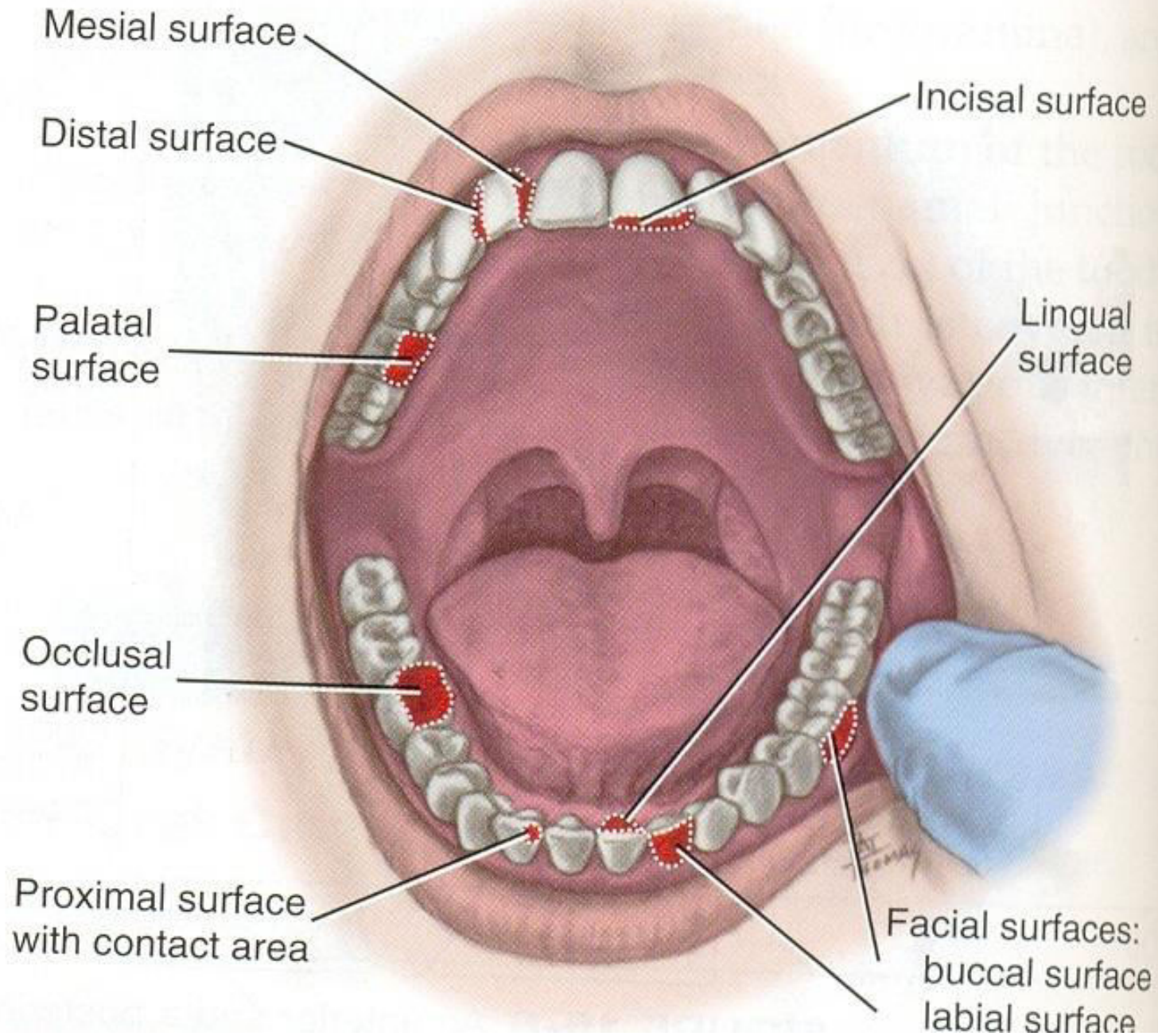


- ▶ Crown covered by Enamel
- ▶ Root covered by Cementum
- ▶ Crown & root joined at cemento-enamel junction (CEJ)/Cervical line

Other supporting tissues



- ▶ Periodontal ligament
- ▶ Alveolar bone
- ▶ Gingiva (Oral Mucous Membrane)

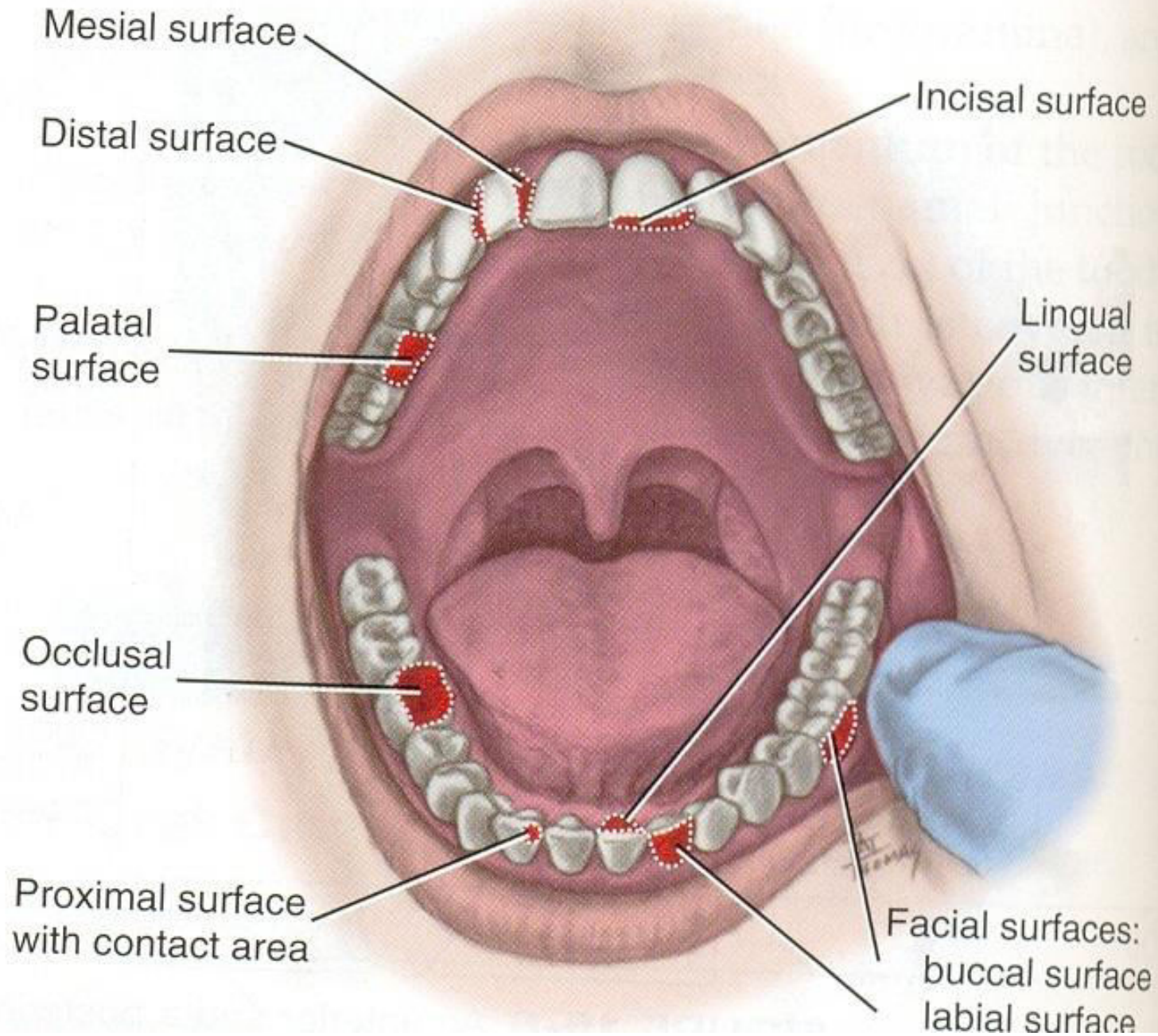


Surfaces & Ridges

According to their positions & uses:

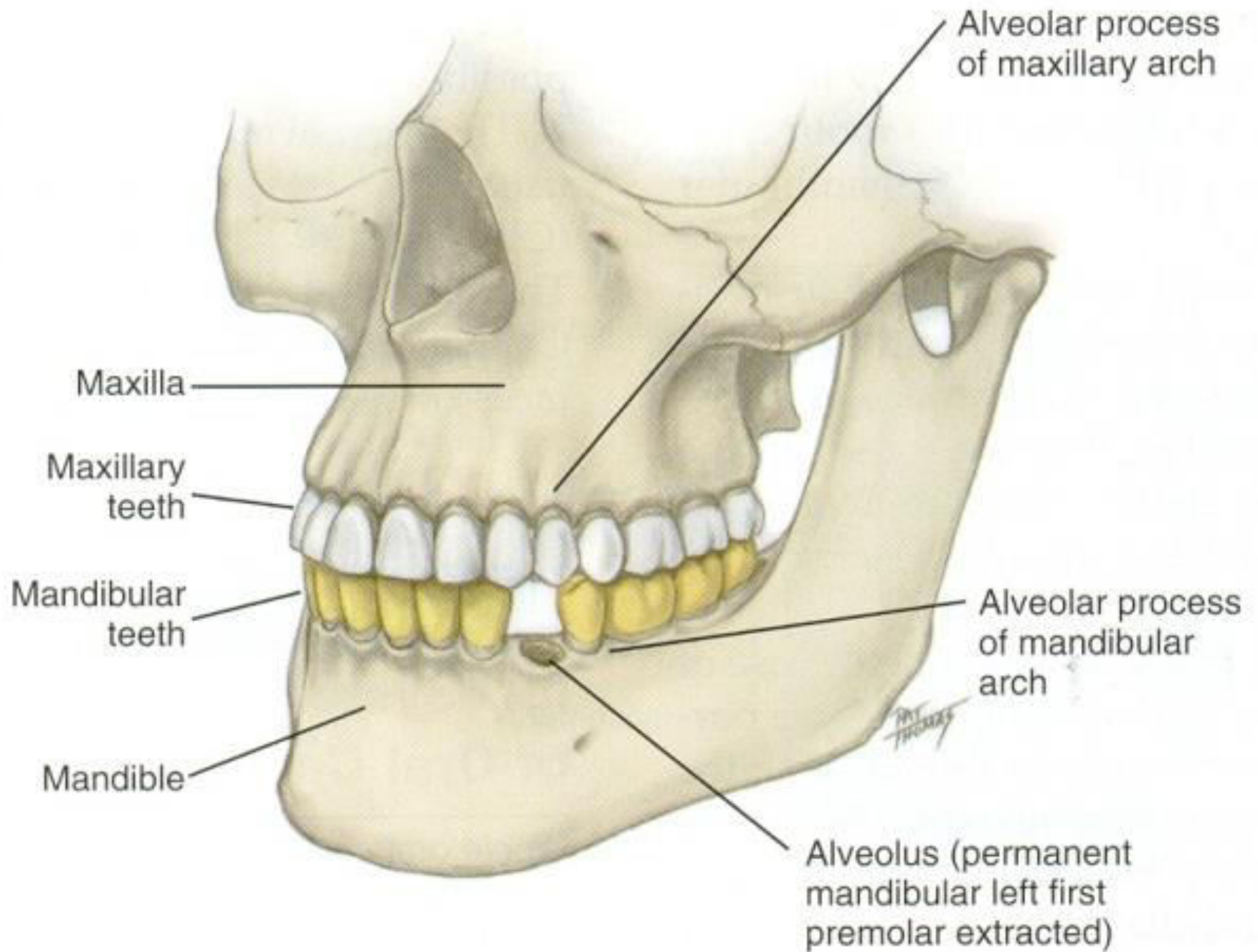
- ▶ Facial surfaces
- Labial surfaces- towards the lip
- Buccal surfaces- towards the cheek

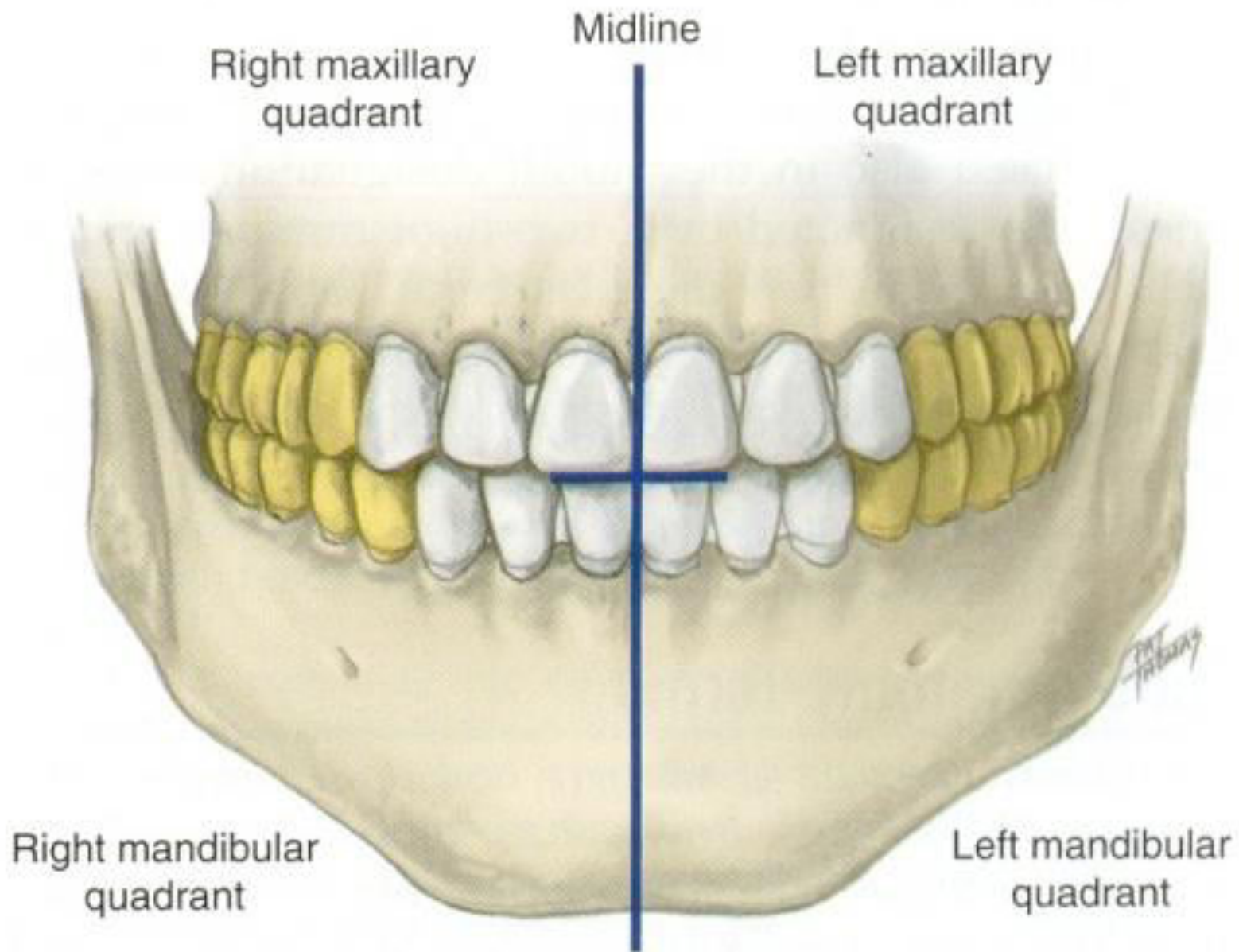




-
- ▶ Lingual surfaces-towards the tongue
 - ▶ Proximal surfaces-towards adjoining teeth
 - Mesial
 - Distal
 - ▶ Occlusal –towards opposite jaw (occlusion)







Anterior teeth - shown white
Posterior teeth - shown yellow

- ▶ Anterior teeth

Incisors & Canines

- ▶ Posterior teeth

Premolars & Molars



Landmarks

- ▶ Cusp
- ▶ Tubercle
- ▶ Cingulum
- ▶ Ridge
 - Marginal ridge
 - Triangular ridge
 - Transverse ridge
 - Oblique ridge

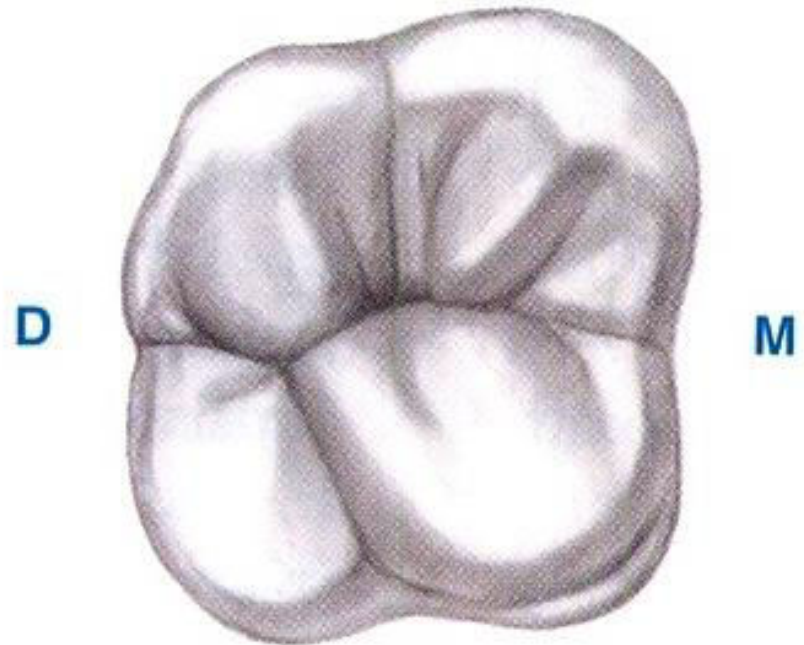


-
- ▶ Fossa
 - ▶ Sulcus
 - ▶ Groove
 - Developmental groove
 - Supplemental groove
 - ▶ Pit
 - ▶ Lobe
 - ▶ Mamelon

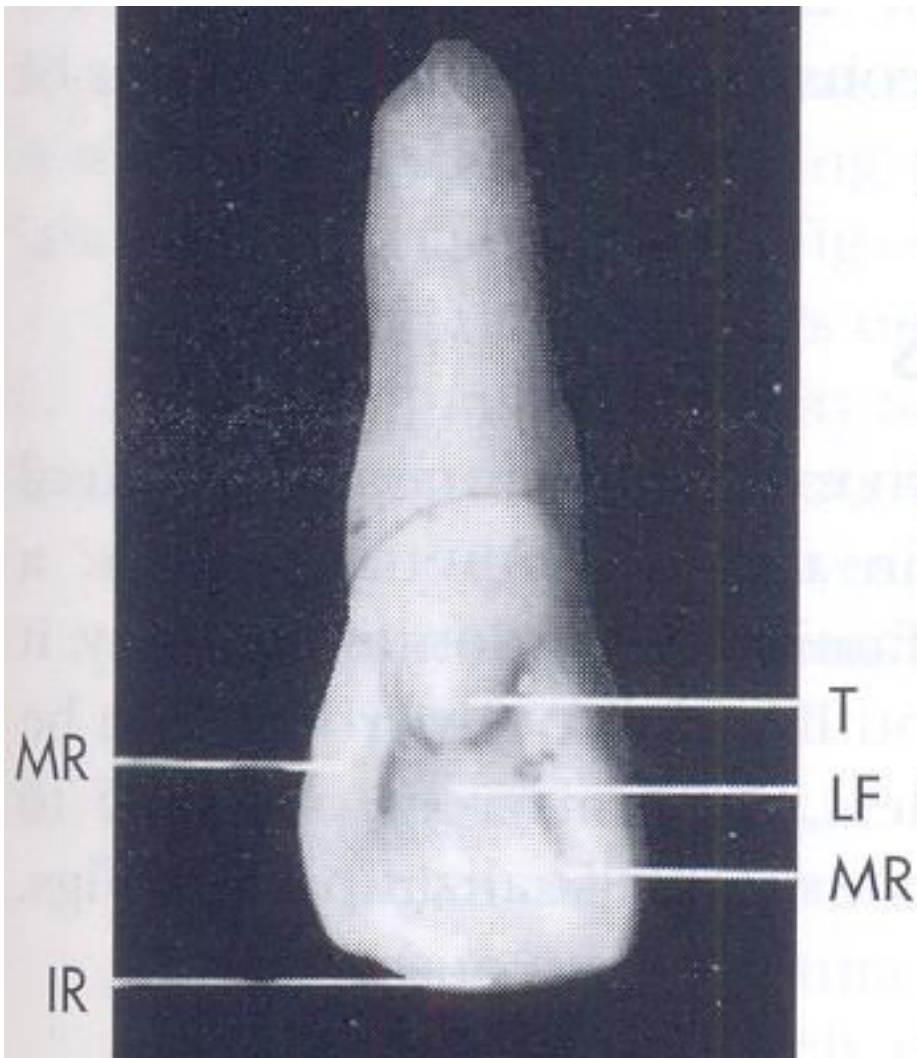


Cusp

- ▶ A cusp is an elevation or mound on the crown portion of a tooth making up a divisional part of the occlusal surface.

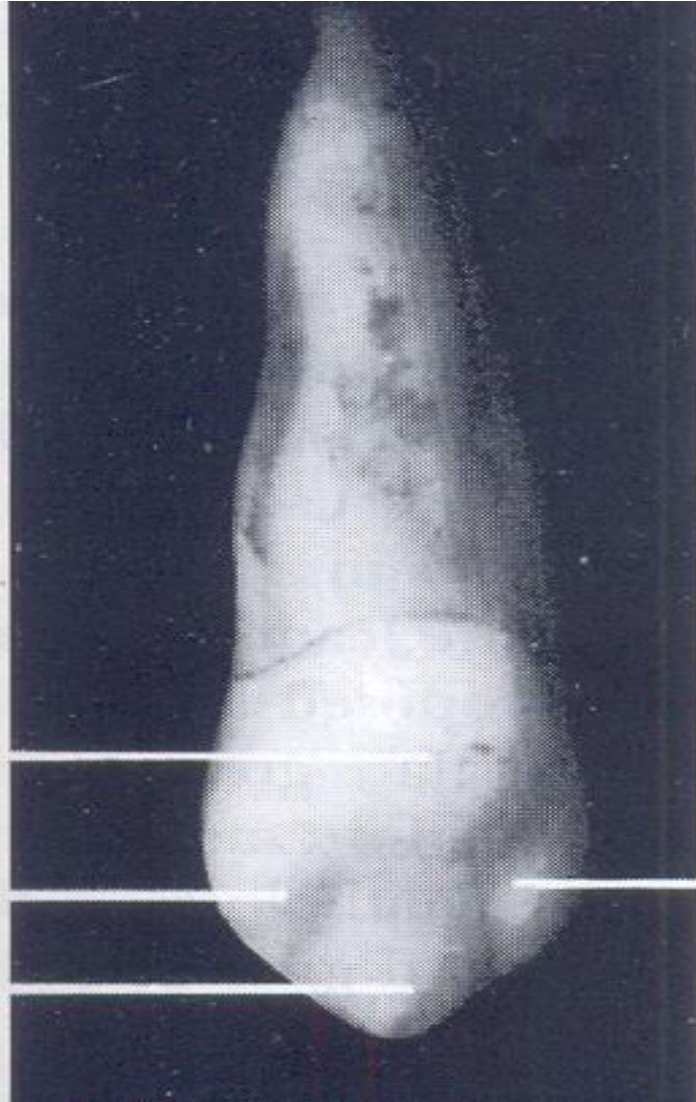


Tubercle



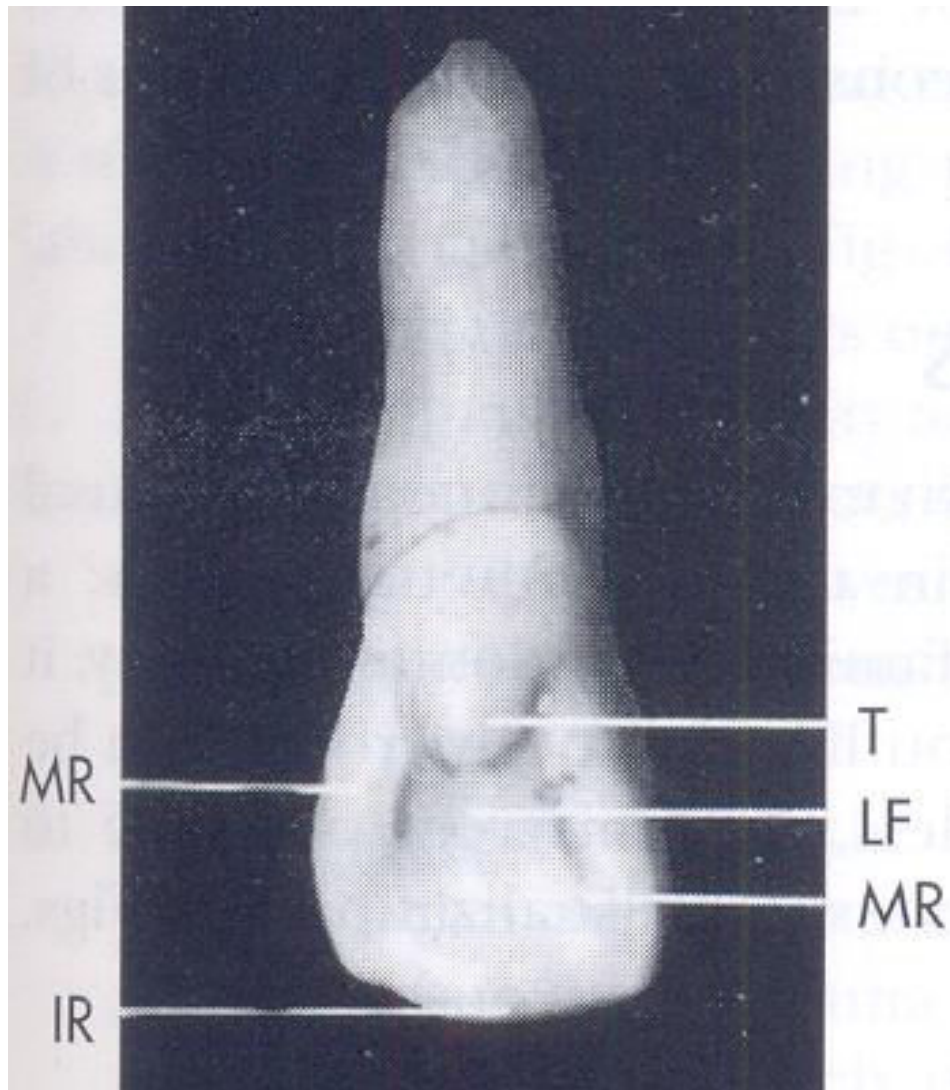
- ▶ It is a smaller elevation on some portion of the crown produced by extra formation of enamel.

Cingulum



- ▶ A cingulum or girdle is the lingual lobe of an anterior tooth & makes up the bulk of the cervical third of the lingual surface.

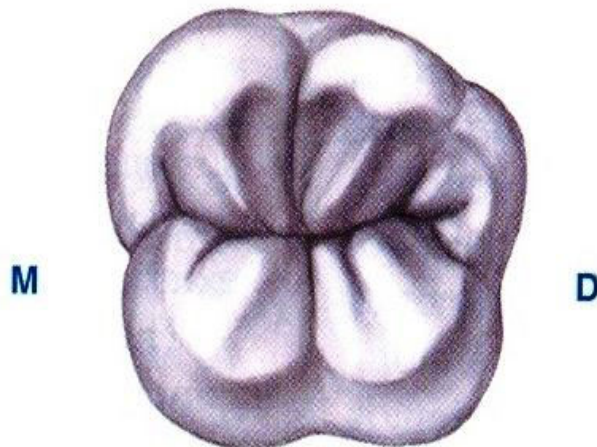
Marginal ridges



- ▶ Marginal ridges are those rounded borders of enamel that form the mesial & distal margins of the occlusal surfaces of premolars & molars, & lingual surfaces of incisors & canines.

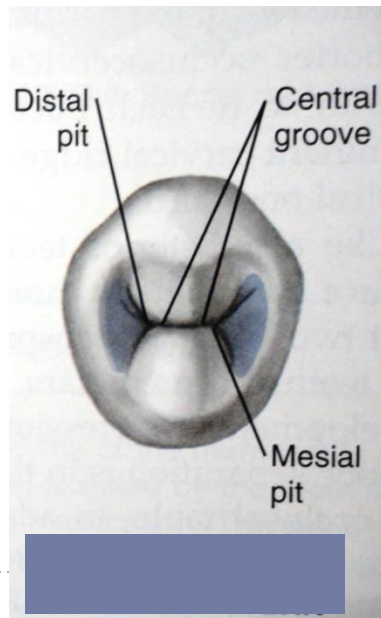
Triangular ridge

- ▶ Triangular ridges are those ridges that descend from the tips of the cusps of molars & premolars toward the central part of the occlusal surfaces. They are so named because the slopes of each side of the ridge are inclined to resemble two sides of a triangle.

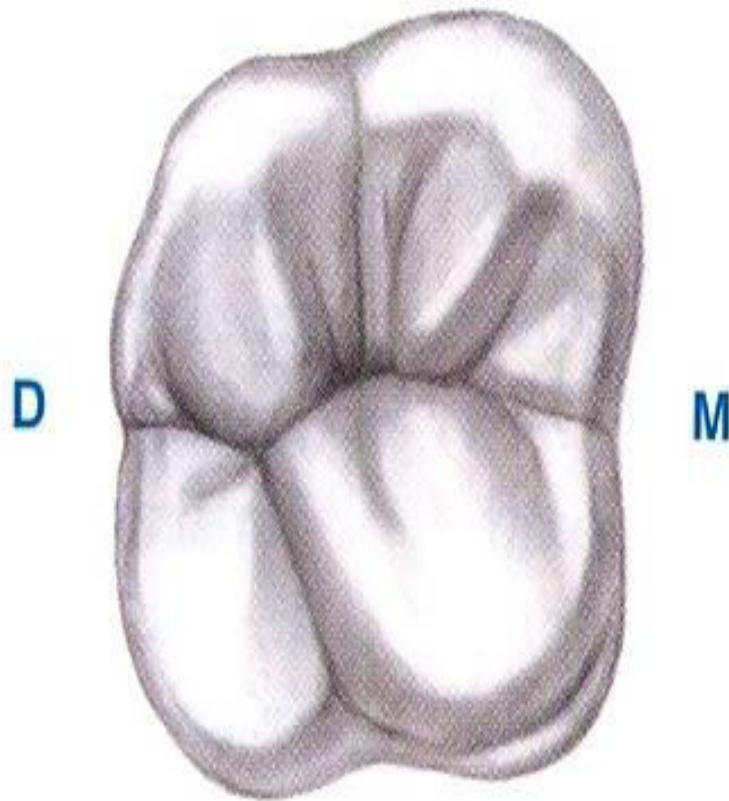


Transverse ridge

- ▶ A transverse ridge is the union of two triangular ridges transversely crossing the surface of a posterior tooth.
- ▶ Formed by joining buccal & lingual triangular ridges.



Oblique ridge



- ▶ A ridge obliquely crossing the occlusal surfaces of maxillary molars & formed by the union of the triangular ridge of the distobuccal cusp & the distal ridge of the mesiolingual cusp.

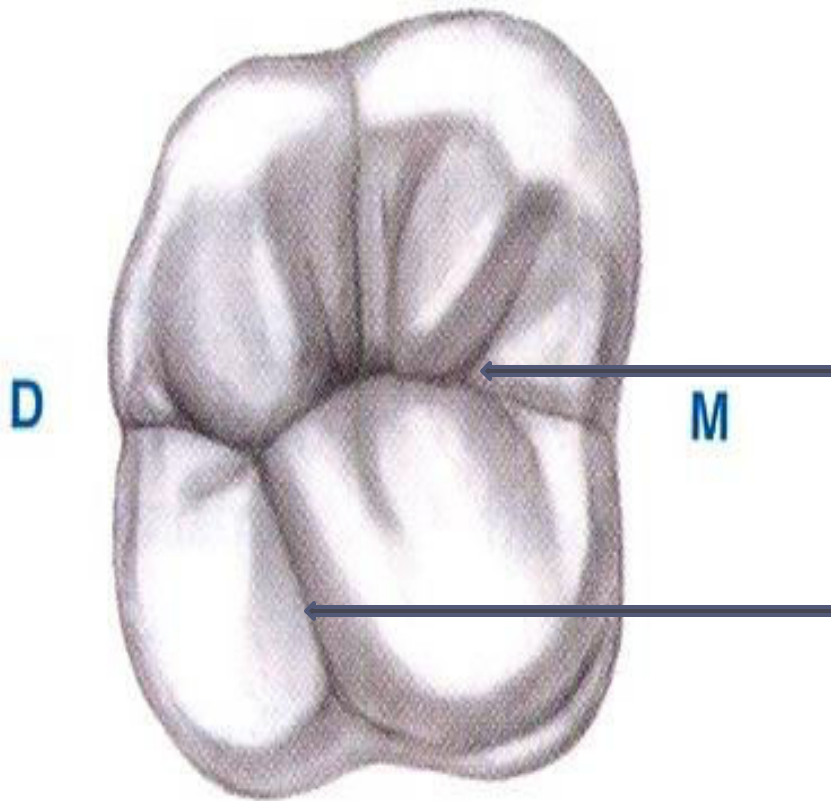
Fossa



- ▶ It is an irregular depression /concavity .
- Lingual fossae
- Central fossae

Sulcus

- ▶ It is a long depression or valley in the surface of a tooth between ridges & cusps, the inclines of which meet at an angle



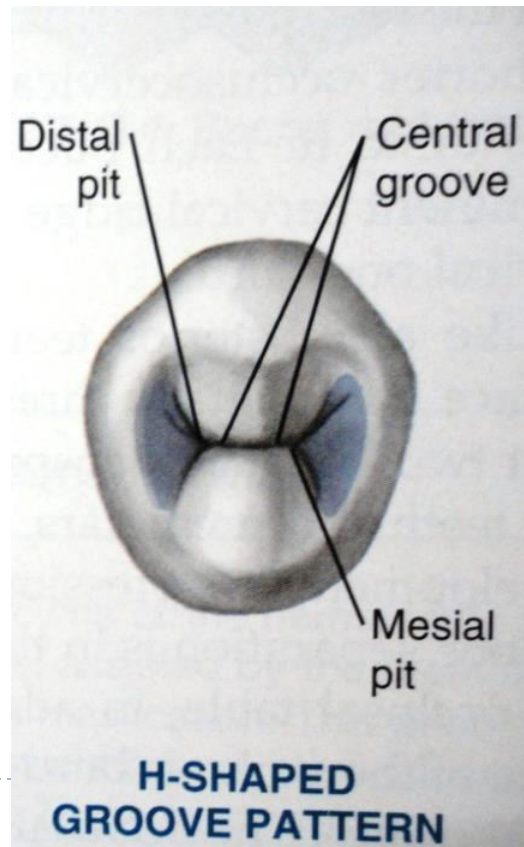
Developmental groove

- ▶ It is a shallow groove or line between the primary parts of the crown or root.
- Supplemental grooves
- Buccal groove
- Lingual groove



Pit

- ▶ It is a small pinpoint depression located at the junction of developmental grooves



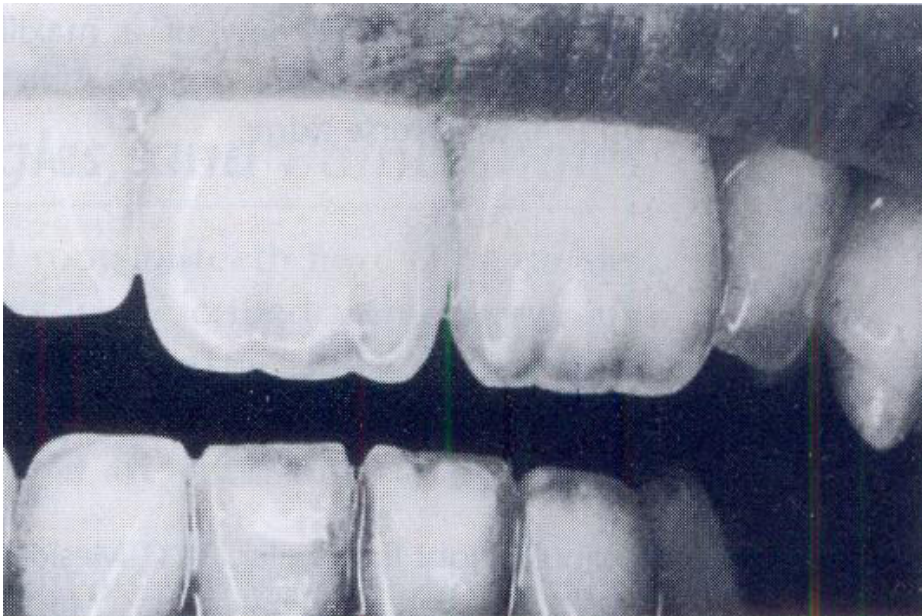
Lobe

- ▶ It is one of the primary section of formation in the development of the crown.
- ▶ Cusps & mamelons are representative of lobes.



Mamelon

- ▶ A mamelon is any one of the three rounded protuberances on the incisal ridges of newly erupted incisor teeth.



Traits

- ▶ A trait is distinguishing characteristic.
 - A. Set trait
 - B. Arch trait
 - C. Class trait
 - D. Type trait



Set trait

- ▶ Characteristics that distinguishes teeth in the primary dentition from permanent dentition



Arch traits

- ▶ Characteristics that distinguishes teeth in the maxillary arch from mandibular arch



Class trait

- ▶ Characteristics that distinguishes teeth from different classes
- ▶ Eg. Incisors have crowns compressed labiolingually for efficient cutting
- ▶ Canines have single pointed cusp for piercing food
- ▶ Premolars have two or three cusps for shearing & grinding
- ▶ Molars have four to five somewhat flattened cusps, ideally suited for grinding food morsels



Type trait

- ▶ Characteristics that distinguishes teeth within one class
- ▶ Eg. Differences between central & lateral incisors
- ▶ Differences between first & second premolars
- ▶ Differences between first,second & third molars



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