

DENTAL ANATOMY

Lec. 2

DR.Ahmed Al-Jobory
B.D.S., M.Sc. Conservative
Department



AHMAD
ALJOBORY

Surfaces and ridges

- The crowns of incisors and canines have four surfaces and ridge, while the crowns of premolars and molars have five surfaces

The surfaces are:

1. Labial surface: is the surface which is toward the lip in incisors and canines (in anterior teeth).

2. Buccal surface: is the surface which is toward the cheek in premolars and molars (posterior teeth).

❖ The labial and buccal surfaces could be termed as the "*facial surfaces*".

3. Lingual surface: is the surface which is facing the tongue (all teeth).

4. Occlusal surface: is the surface of the posterior teeth coming in contact with the teeth in the opposite jaw during closing the mouth.

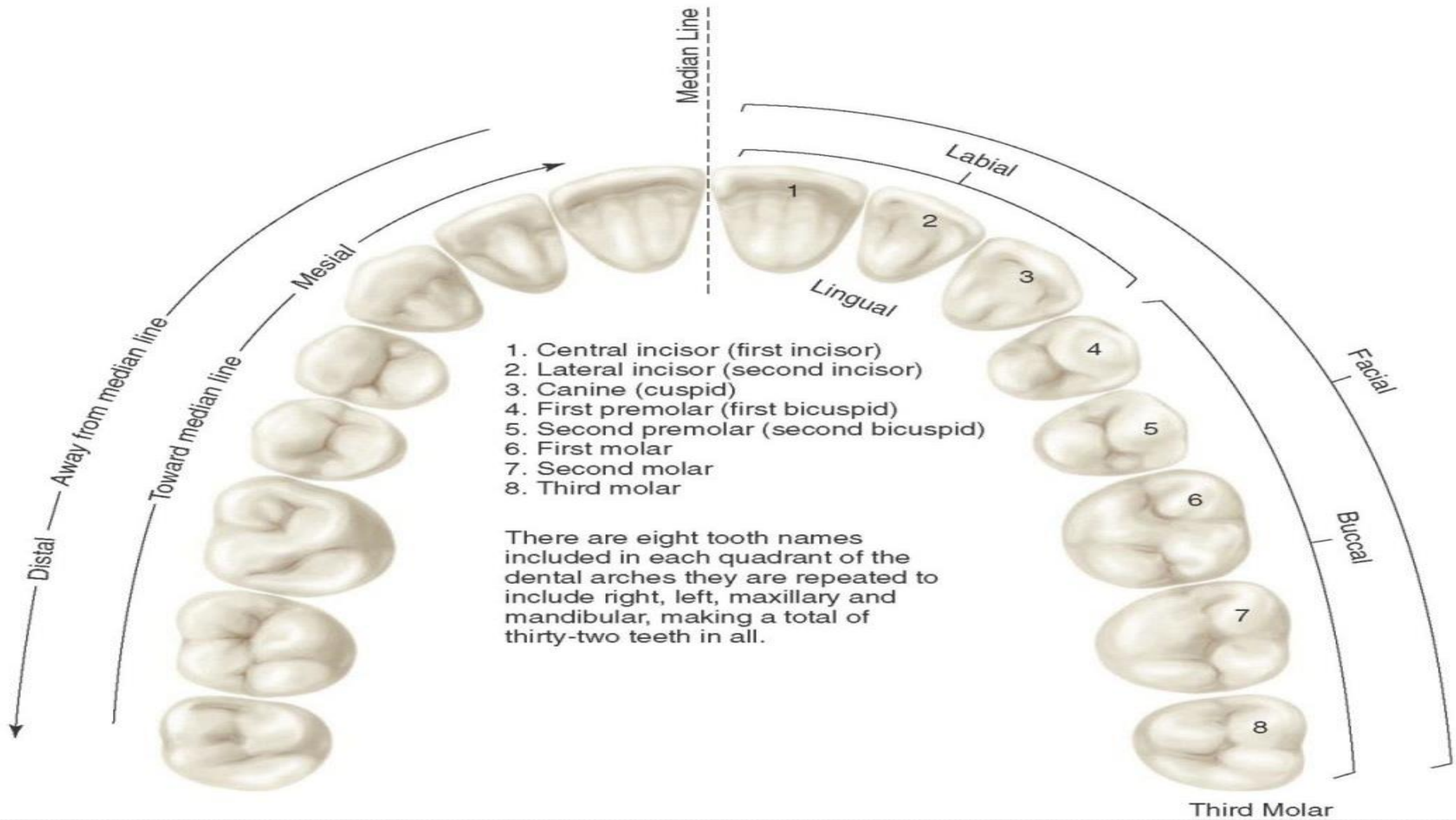
❖ In anterior teeth, this surface is called "*incisal ridge*".

5. Proximal surface: is the surface of the tooth facing toward adjacent teeth in the same dental arch.

a. Mesial surface: is the surface which is facing toward the median line.

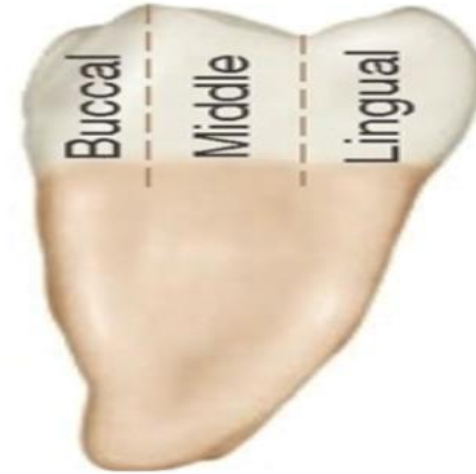
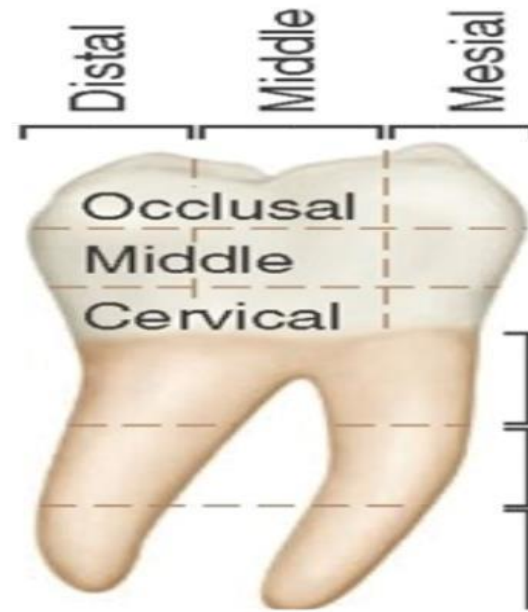
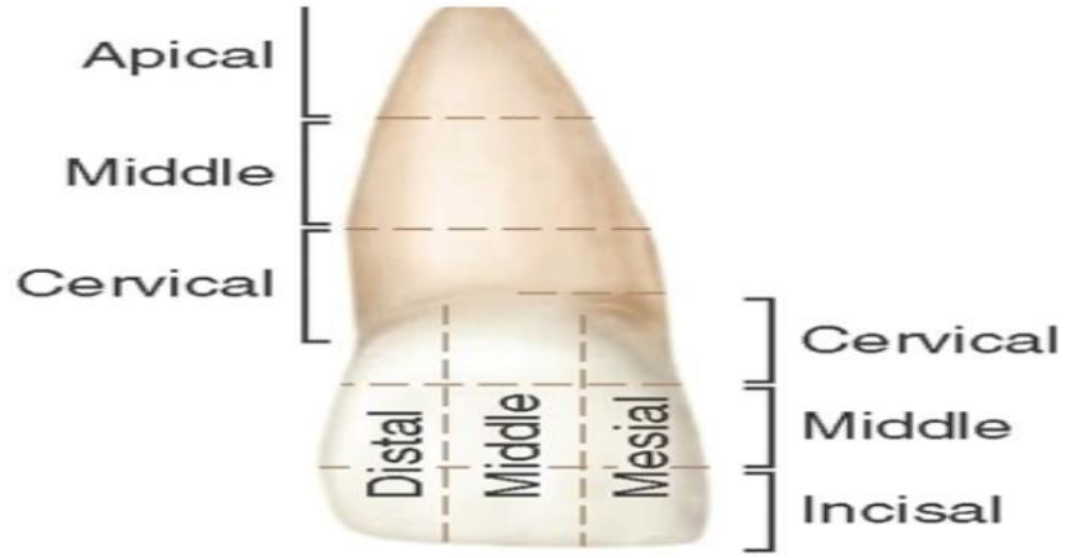
b. Distal surface: is the surface which is facing away from the median line.

❖ All teeth have their mesial surfaces touching the distal surfaces of the adjacent tooth except the maxillary and mandibular central incisor (both permanent and deciduous). The area of the mesial and distal surface that touch its neighbor in the arch is called the "*contact area*".



Division of the crown into thirds

- For description, the crown and the root are divided into thirds according to the position of the surface.
- **Line angle:** it is formed by the junction of two surfaces and gets its name from these surfaces. Example: mesio-labial line angle.
- **Point angle:** it is formed by junction of three surfaces and get its name from these surfaces. Example: mesiolinguo-incisal point angle



Tooth Numbering systems

- ❑ The teeth numbering system is designed to develop the standard reference principle to each particular tooth. Three different methods have been employed throughout the teeth numbering history, and only two of them get commonly used nowadays.

1.Universal notation system

2.Palmer notation system

1.Universal notation system

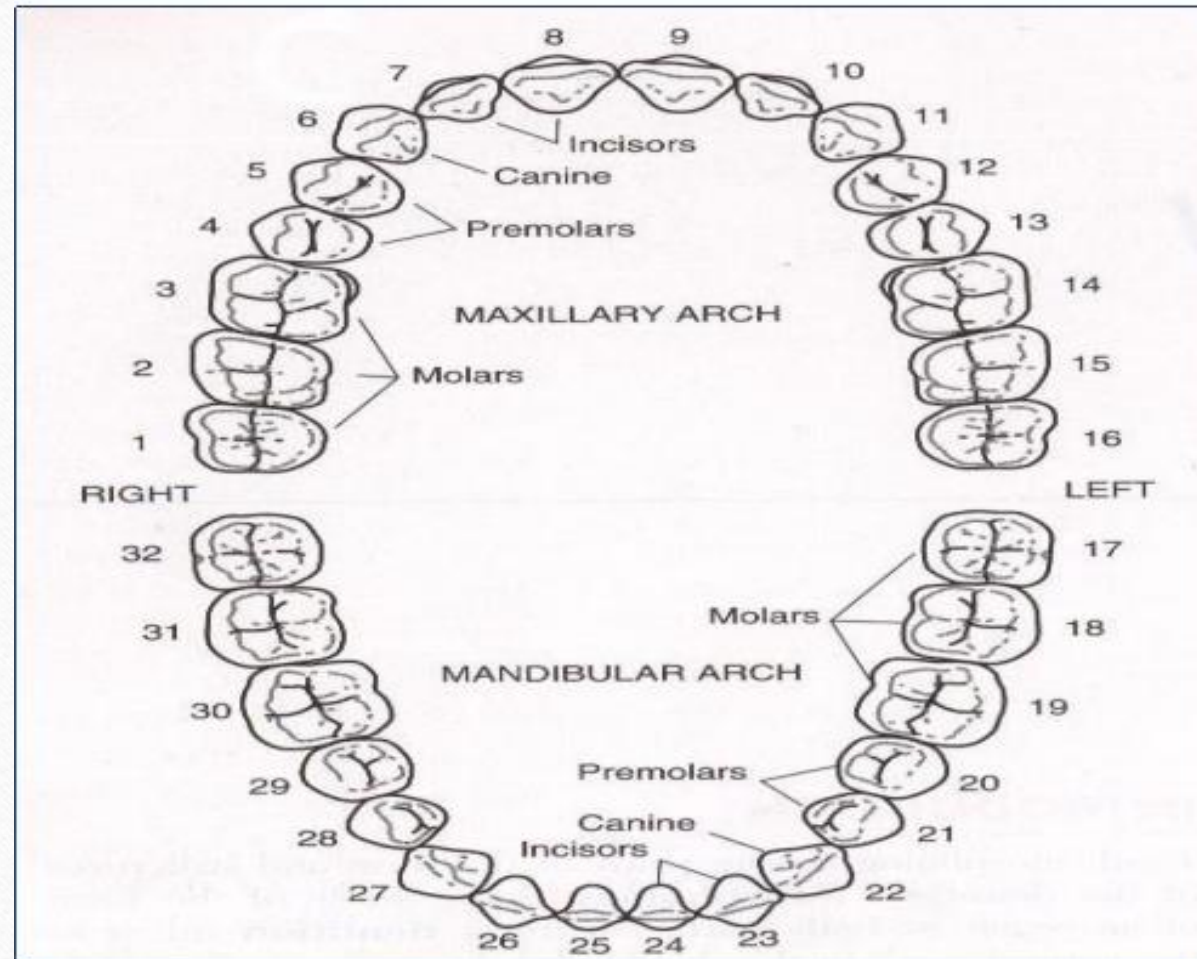
A. Permanent teeth:

		Maxillary															
Right		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
		Mandibular															

#11: Permanent maxillary left canine.

#29: Permanent mandibular right second premolar.

#8: Permanent maxillary right central incisor.



B. Deciduous teeth:

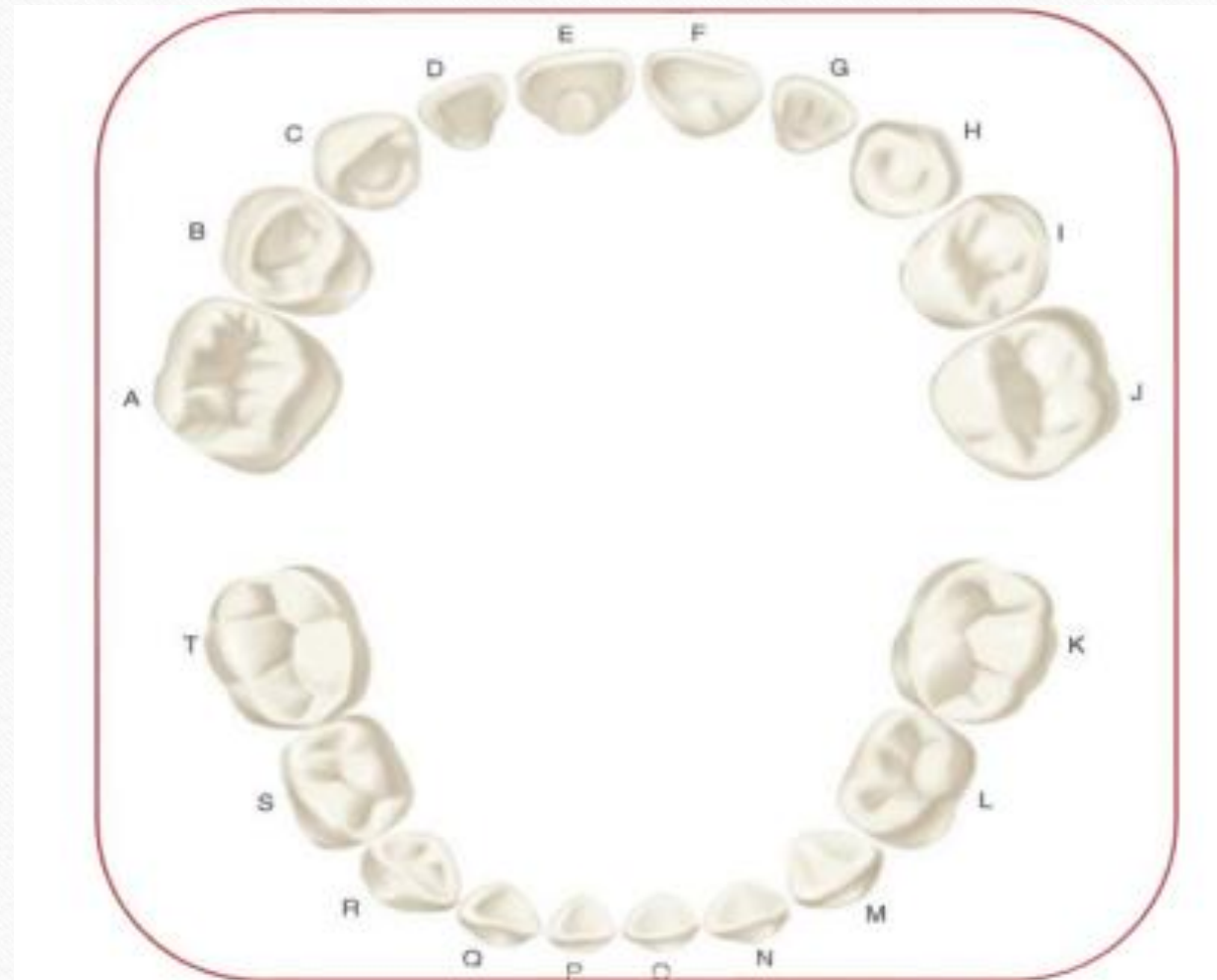
Right	A	B	C	D	E		F	G	H	I	J	Left
	T	S	R	Q	P		O	N	M	L	K	

Examples:

#B: Deciduous maxillary right first molar.

#O: Deciduous mandibular left central incisor.

#D: Deciduous maxillary right lateral incisor.





2. Palmer notation system


A. Permanent teeth

		Maxillary																
Right		8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
		8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
		Mandibular																

Examples:

 Permanent maxillary right first molar.


 Permanent mandibular left canine.


 Permanent maxillary right third molar.


B. Deciduous teeth

Right	E	D	C	B	A		A	B	C	D	E	Left
	E	D	C	B	A		A	B	C	D	E	

Examples:

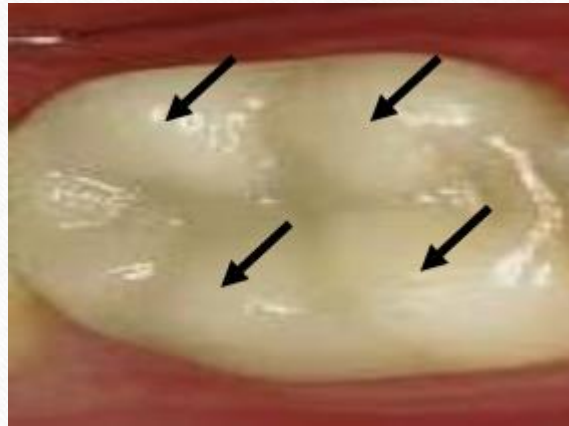
 D Deciduous maxillary right
first molar.

 C Deciduous mandibular
left canine.

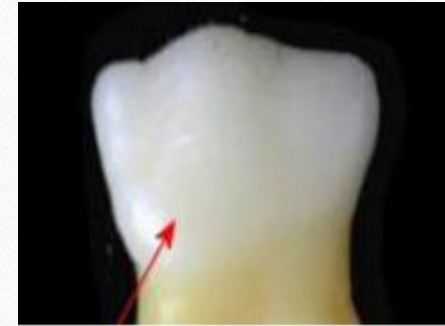
 E Deciduous maxillary right
second molar.

Anatomical landmarks

- In order to study an individual tooth intelligently, we must be able to recognize all landmarks of importance by name, these include:
- 1. Cusp: it is an elevation or mound on the crown portion of a tooth making up a divisional part of the occlusal surface. It contributes to a significant portion of the tooth's surface.



2. Tubercle: it is a smaller elevation on some portion of the crown produced by an extra formation of enamel. These are deviations from the typical form.



3. Cingulum (Latin word for girdle): it's the lingual lobe of the anterior teeth. It makes up the bulk of the cervical third of the lingual surface. Its convexity mesiodistally resembles a girdle encircling the lingual surface at the cervical third. It is frequently identifiable as an inverted V-shaped ridge.



4. Ridge: it is any linear elevation on the surface of a tooth and is name according to its location (e.g. buccal ridge, incisal ridge, marginal ridge).

- a. Marginal ridge:* these are rounded borders of enamel that formed the mesial and distal margins of the occlusal surfaces of premolars and molars and the mesial and distal margins of the lingual surfaces of the incisors and canines.



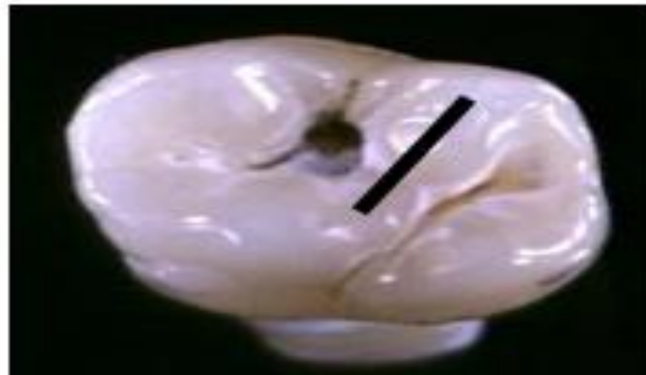
b. Triangular ridge: these descend from the tips of the cusps of molars and premolars toward the central part of the occlusal surfaces. They are so named because the slopes of each side of the ridge are inclined to resemble two sides of a triangle. They are named after the cusps, to which they belong, e.g. the triangular ridge of the buccal cusp of the maxillary first premolar.



c. Transverse ridge: it is the union of two triangular ridges crossing transversely the surface of a posterior tooth.

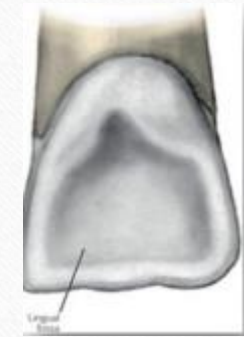


d. Oblique ridge: it is a ridge crossing obliquely the occlusal surfaces of maxillary molars. It is formed by the union of the triangular ridge of the disto-buccal cusp and the distal cusp ridge of the mesio-lingual cusp.

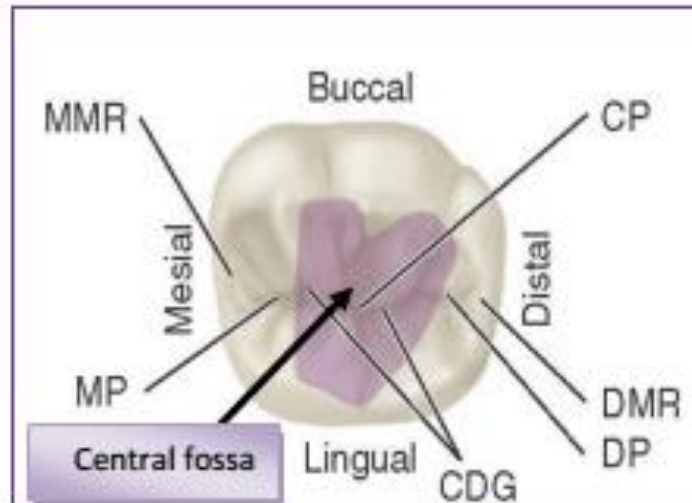


5. Fossa : it is an irregular depression or concavity.

a. Lingual fossa: it is located on the lingual surface of anterior teeth

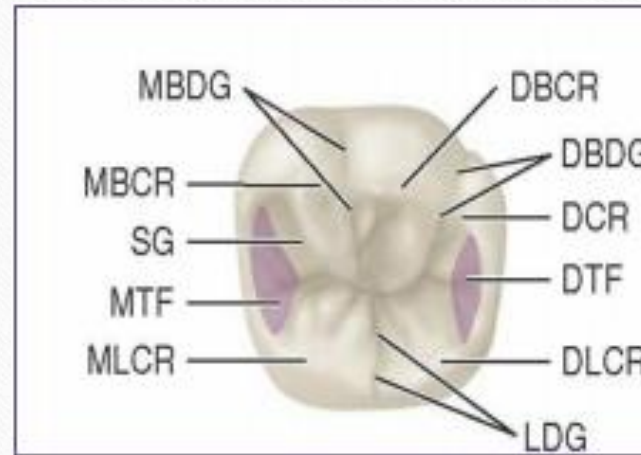


b. Central fossa: it is located on the occlusal surface of molar



MMR: mesial marginal ridge. **DMR**: distal marginal ridge. **MP**: mesial pit. **DP**: distal pit. **CP**: central pit. **CDG**: central developmental groove.

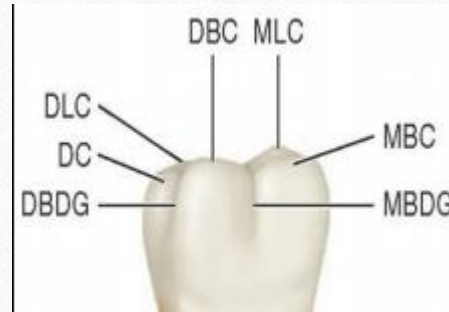
c. *Triangular fossa*: it is located on the occlusal surfaces of molars and premolars, mesial or distal to marginal ridges



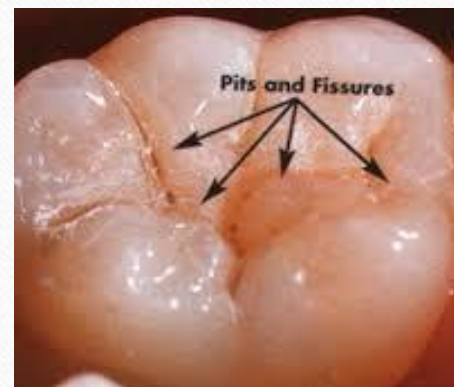
6. Sulcus: it is a long depression or valley in the surface of a tooth between ridges and cusps, the inclines of which meet at an angle. A sulcus has a developmental groove at the junction of its inclines.



7. Developmental groove: it is a shallow groove or line between the primary parts of the crown or root.



8. Pit: it is a small pinpoint depression located at the junction of developmental grooves or at terminals of those grooves, e.g. central pit is a term used to describe landmark in the central fossa of molars where developmental grooves join.



9. Mamelon: It's anyone of the three rounded protuberances found on the incisal ridge of newly erupted incisor teeth.



THANK YOU

